

**AGENDA**  
**REGULAR MEETING OF THE**  
**CITY OF KING CITY COUNCIL**  
**AND**  
**Sitting as SUCCESSOR AGENCY OF**  
**THE RDA FOR THE CITY OF KING**

**TUESDAY SEPTEMBER 12, 2017**  
**6:00 P.M.**

**CITY HALL**  
**212 S. VANDERHURST AVENUE**  
**KING CITY, CALIFORNIA 93930**

*\*Spanish interpretation services will be available at meeting*

*In compliance with the Americans with Disabilities Act, if you need special assistance to participate in a City meeting, Please contact the City Clerk's Office (831-386-5925) at least 48 hours prior to the Meeting to ensure that reasonable arrangements can be made to provide accessibility to the meeting.*

*\* Please submit all correspondence for City Council PRIOR to the meeting with a copy to the City Clerk.*

**1. CALL TO ORDER**

**2. ROLL CALL:** Council Members Darlene Acosta, Robert Cullen, Carlos DeLeon, Mayor Pro Tem Carlos Victoria, and Mayor Mike LeBarre

**3. FLAG SALUTE**

**4. CLOSED SESSION ANNOUNCEMENTS**

**5. SPECIAL PRESENTATIONS**

**A. September National Addiction and Recovery Month Proclamation**

**B. Dr. Brian Walker Introduced by Board President, Paulette Bumbalough**

**6. PUBLIC COMMENT**

Any member of the public may address the Council for a period not to exceed *three minutes*' total on any item of interest within the jurisdiction of this Council that is not on the agenda. The Council will listen to all communications; however, in compliance with the Brown Act, the Council cannot act on items not on the agenda. Comments should be directed to the Council as a whole and not to any individual Council Member. Slanderous, profane or personal remarks against any Council Member, staff member or member of the audience is not permitted.

**7. COUNCIL COMMUNICATIONS & COMMITTEE REPORTS**

Individual Council Members may comment on Council business, his or her Council activities, City operations, projects or other items of community interest. Council Members may also request staff to report back at a subsequent meeting on any matter or take action to direct staff to prepare a staff report for a future agenda.

**8. STAFF COMMUNICATIONS**

Comments presented by the City Manager, City Attorney or other staff on City business and/or announcements.

## **9. CONSENT AGENDA**

The following items listed below are scheduled for consideration as a group. The recommendations for each item are noted. Members of the audience may speak on any item(s) listed on the Consent Agenda. Any Council Member, the City Manager, or the City Attorney may request that an item be withdrawn from the Consent Agenda to allow for full discussion. The Council may approve the remainder of the Consent Agenda on one motion. Items withdrawn from the Consent Agenda may be considered by separate motions at the conclusion of the discussion of each item.

- A. **Meeting Minutes of August 22, 2017 Council Meeting**  
Recommendation: approve and file.
- B. **City Check Register**  
Recommendation: approve and file.
- C. **Consideration: Additional Appropriation for Citywide Police Security Camera Project**  
Recommendation: 1) approve an additional appropriation of \$9,200 from the General Fund for the Citywide Police Security Camera Project; and 2) authorize the City Manager to approve change orders up to \$15,000 for the ServeillanceGRID Integration, Inc. agreement.
- D. **Consideration: Agreement with Monterey County Water Resource Agency to Participate in the Salinas River Maintenance Program and the Salinas River Channel Stream Maintenance Program's River Management Unit Association, Inc.**  
Recommendation: 1) adopt resolution No. 2017-4603 approving an Agreement to Participate in the Salinas River Stream Maintenance Program between the City of King City and Monterey County Water Resource Agency (MCWRA) and authorizing the City Manager to execute said Agreement; 2) approve an Agreement between the City of King City and the Salinas River Channel Stream Maintenance Program's River Management Unit Association, Inc. and authorize the City Manager to execute the Membership Form; and 3) appropriate \$4,050 for the fees.
- E. **Consideration: Annual Fire Inspection Program and Changes to Fire Inspection Fees**  
Recommendation: 1) approve the proposed Annual Fire Inspection Program; 2) adopt a Resolution amending the Master Fee Schedule lowering the Fire Inspection Fee and adding a re-inspection fee; and 3) approve and authorize the City Manager to execute an amendment to the Carmel fire Protection Associates Professional Services Contract payment and fee schedule in a form approved by the City Attorney to provide for annual fire inspection costs.
- F. **Consideration: Agreement with Earth Design International for Professional Community Development Services**  
Recommendation: 1) approve and authorize the City Manager to execute a new Professional Services Agreement with Earth Design International (EDI) for community development services; and 2) authorize the City Manager to make non-substantive changes necessary as approved to form by the City Attorney.

- G. Consideration: Appointment of Alternate Board Member to the Salinas Valley Basin Groundwater Sustainability Agency  
Recommendation: appoint the City Manager to represent the City as the Alternate Board Member on the Salinas Valley Basin Groundwater Sustainability Agency (GSA) Board of Directors.
- H. Consideration: Six Month Extension of the Rental Fee of \$250 per Month for the King City Boxing Club  
Recommendation: approve by motion the extension of the \$250 rental fee with the King City Boxing Club for rental of the racquetball facility.

## **10. PUBLIC HEARINGS**

- A. Consideration: Modification of the City's Sign Ordinance Title 17, Chapter 17.55 of the King City Municipal Code  
Recommendation: 1) Open the Public Hearing, consider public testimony; 2) Introduce and conduct the First Reading, by title only; and 3) Set the Second Reading and Adoption for the next regularly scheduled City Council meeting of September 26th.
- B. Consideration: Amend the General Plan Land Use Designation of the Remaining Portion of APN NO. 245-111-030-000 and APN 245-111-029-000 From Public Quasi-Public ("PQ") to Agriculture ("AG") and Amend the Zoning of the Same Portion of Land from Light Industrial ("M-1") Zoning District to Agriculture ("A")  
Recommendation: 1) Open the Public Hearing, consider public testimony; 2) Introduce and conduct the First Reading, by title only; and 3) Set the Second Reading and Adoption for the next regularly scheduled City Council meeting of September 26th.
- C. Consideration: An Ordinance of the City Council of the City of King Adding Chapter 12.18 to the City of King Municipal Code Setting Forth Procedures for Expediting Permitting Processing for Electronic Vehicle Charging Systems  
Recommendation: 1) Open the Public Hearing, consider public testimony; 2) Introduce and conduct the First Reading by title only; and 3) Set the Second Reading and Adoption for the next regularly scheduled City Council meeting of September 26<sup>th</sup>.

## **11. REGULAR BUSINESS**

- A. Consideration: Wastewater Collection System Master Plan and Wastewater Treatment Facilities Plan  
Recommendation: 1) approve the proposed Wastewater Collection System Master Plan and Wastewater Treatment Facilities Plan; 2) adopt a Resolution approving a Water Recycling Study Grant Application; 3) approve and authorize the City Manager to execute a Memorandum of Understanding (MOU) with California Water Service to participate in a joint Recycled Water Feasibility Study; and 4) direct staff to solicit proposals for preparation of a wastewater rate study.

- B. **Consideration: Street Improvement 5-Year Capital Improvement Project**  
**Recommendation: approve the proposed Street Improvement 5-Year Capital Improvement Project (CIP)**

**12. CITY COUNCIL CLOSED SESSION**

Announcement(s) of any reportable action(s) taken in Closed Session will be made in open session, and repeated at the beginning of the next Regular City Council meeting as this portion of the meeting is not recorded.

- 1. **Government Code Section 54956.9**  
**CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION**  
Initiation of litigation Pursuant to Paragraph (4) of Subdivision (d) of Section 54956.9 (Deciding Whether to Initiate Litigation):  
One Case

**13. ADJOURNMENT**

# City of King

## Proclamation

*Declaration of National Addiction and Recovery Month  
September 2017*

**WHEREAS**, behavioral health is an essential part of health and one's overall wellness; and

**WHEREAS**, prevention of mental and/or substance use disorders works, treatment is effecting, and people recover in our area and around the nation; and

**WHEREAS**, preventing and overcoming mental and/or substance use disorders is essential to achieving healthy lifestyles, both physically and emotionally; and

**WHEREAS**, we must encourage relatives and friends of people with mental and/or substance use disorders to implement preventive measures, recognize the signs of a problem, and guide those in need to appropriate treatment and recovery support services; and

**WHEREAS**, its estimated that over 150 people in King City, California are affected by these conditions; and

**WHEREAS**, to help more people achieve and sustain long-term recovery, the U.S. Department of Health and Human Services (HHS), the Substance Abuse and Mental Health Services Administration (SAMHSA), the White House Office of National Drug Control Policy (ONDCP), and Sun Street Centers invite all residents of King City, California to participate in National Recovery Month September 2017; and

**NOW, THEREFORE**, I, Mike LeBarre, Mayor of King City, do hereby declare September as National Recovery Month.



Mike LeBarre  
Mayor

**City Council Meeting  
August 22, 2017**

**1. CALL TO ORDER:**

Regular Meeting called to order at 6:01pm by Mayor LeBarre.

**2. FLAG SALUTE:**

The flag salute was led by Mayor LeBarre.

**3. ROLL CALL:**

City Manager Adams conducted roll call.

City Council: Darlene Acosta, Robert Cullen, Carlos DeLeon, Mayor Michael LeBarre,  
Mayor Pro Tem Carlos Victoria.

City Staff: City Manager Steven Adams; Assistant City Attorney Roy Santos; Police Chief  
Robert Masterson; City Engineer, Octavio Hurtado; Admin. Asst./Deputy City  
Clerk, Erica Sonne

**4. CLOSED SESSION ANNOUNCEMENTS:**

None

**5. PRESENTATIONS:**

- A. Jacob's Heart Proclamation was excepted by Council member Acosta and will be mailed to them.
- B. Commendation Honoring Ray and Martha DeHoyos. Unfortunately, the DeHoyos did not make it to the meeting their proclamation will be mailed.

**6. PUBLIC COMMUNICATIONS:**

**7. COUNCIL COMMUNICATIONS:**

Mayor Pro Tem Victoria stated that High School is back in session and AMBAG will be in two weeks. He and Mayor LeBarre attended Girls Inc. luncheon and was impressed with the young ladies.

Council Member Cullen stated that he attended the Forden Park ribbon cutting and it was well attended. Salinas Valley Solid Waste Authority gave out Wally Waste Not Awards; Arts Magnet School is going to get \$15,000 grant to refurbish the garden. Hayashi and Wayland is doing a ribbon cutting through the Chamber of Commerce at 5:00pm on Aug. 30<sup>th</sup>. Fort Hunter Liggett Community Expo this Thursday City and Chamber will have a joint booth. New Chamber manager Janet Bessemer. He is the Chair of the Southern Monterey County Foundation and the grant period opened today and deadline is Sept. 22<sup>nd</sup>.

Council Member Acosta requested that the Council put a resolution on the Agenda for September 12<sup>th</sup> for National Alcohol and Drug Recovery Month in September. Council was in consensus on this item being placed on the agenda.

Council Member DeLeon stated that grammar school started and there was an introduction of new teachers. Catholic Church Walk for Peace, Friday 3:30p.m. from the church to the cemetery.

Mayor LeBarre stated Fordon Park and Girls Inc. were great. Reminder of the Firemen and KCPOA BBQ.

#### **8. CITY STAFF REPORTS AND COMMENTS:**

City Manager Adams recognized Octavio Hurtado, City Engineer for his work on Fordon Park. He thought the ribbon cutting was a great event. Probation Officer is on both school campus' now. Security cameras up in a couple of months. Pro-youth started daily the day school started. City Hall is getting new carpet.

Asst. Attorney Santos stated that the Attorneys office appreciates staff for making their jobs easier by getting items to them. New Legislation on City based light poles passed by the state for use as cell towers.

#### **9. CONSENT AGENDA**

- A. Meeting Minutes of August 8, 2017 Council Meeting
- B. City Monthly Treasurer's Report- June 2017
- C. City Monthly Treasurer's Report- July 2017
- D. Successor Agency Monthly Treasurer's Report- June 2017
- E. Successor Agency Monthly Treasurer's Report- July 2017
- F. Public Financing Authority Monthly Treasurer's Report- June 2017
- G. Public Financing Authority Monthly Treasurer's Report- July 2017
- H. City Check Register
- I. Successor Agency Register
- J. Public Financing Authority Register
- K. Consideration: Amendment to KCPOA Agreement Regarding Work Week Hours
- L. Consideration: Amendment to Façade Enhancement Grant Program Guidelines
- M. Consideration: An Ordinance of the City Council of the City of King Amending Chapter 17.03 of Title 17 of the King City Municipal Code Pertaining to Commercial Cannabis Activity; Amending Chapter 17.30 of Title 17 of the King City Municipal Code Pertaining to M-1 Industrial District; And Amending Chapter 17.31 of Title 17 of The King City Municipal Code Pertaining to M-2 Industrial District; an Ordinance Amending Section D.3(G) of Chapter 4 (Development Standards) of the East Ranch Business Park Specific Plan for the Purpose of Adding Additional Commercial Cannabis Uses; and findings related to the California Environmental Quality Act
- N. Consideration: Membership in Association of California Cities Allied with Public Safety (ACCAPS)
- O. Consideration: Notice of Completion King City Energy Innovation Project
- P. Consideration: Flashing Crosswalk Warning Sign Project
- Q. Consideration: Airport T-Hangar Settlement Agreement and Mutual Release

Council Member DeLeon pulled item H and P.

Karen Jernigan spoke on item Q she appreciates staff for bringing this to a conclusion.

Action: Motion to approve consent agenda A-G, I-O and Q by Acosta and seconded by Victoria.

AYES: Council Members: Mayor LeBarre, Acosta, Cullen, DeLeon and Mayor Pro Tem Victoria

NOES: Council Members:

ABSENT: Council Members:  
ABSTAIN: Council Members:

Council Member DeLeon needed clarification of Item H checks to Aleshire & Wynder, Hanna and Brunetti. He also wanted to know on Item P why not put a stop sign instead of a flashing sign. RJ Rivera pointed out a cost difference in the staff report.

Action: Motion to approve consent agenda H and P with P not to exceed more than \$10,000 by Cullen and seconded by DeLeon.

AYES: Council Members: Mayor LeBarre, Acosta, Cullen, DeLeon and Mayor Pro Tem Victoria  
NOES: Council Members:  
ABSENT: Council Members:  
ABSTAIN: Council Members:

## 10. PUBLIC HEARINGS:

None

## 11. REGULAR BUSINESS:

### A. Consideration: District Watch Activities and Meetings

Recommendation: approve staff's recommended strategies for future District Watch activities and meetings.

City Manager Adams introduced this item.

Chief Masterson further introduced this item, explaining the Police Chief's Advisory Committee, District Officers and Supervisors and beat structure he wants to set-up in our city.

Council member Cullen would like to see districts do the clean-up days. District 5 is where the Fairgrounds is located and they would like to be involved.

Council member DeLeon feels this is great and the Chief is doing a great job.

Council member Acosta is feeling a little anxious about this but feels that this will be great.

Council member Victoria feels that it is going to be different for his district and he feels that things are changing. He feels it will be a challenge. He thanked staff as well.

Mayor LeBarre feels that coordinating with the school and doing it in May to get recreation information out. City Manager feels that April may work.

Action: Motion to approve staff's recommended strategies for future District Watch activities and meetings by Council Member Victoria seconded by Council Member DeLeon.

AYES: Council Members: Mayor LeBarre, Acosta, Cullen, DeLeon and Mayor Pro Tem Victoria  
NOES: Council Members:  
ABSENT: Council Members:  
ABSTAIN: Council Members:

### B. Consideration: Community Development Block Grant (CDBG) Process and Funding Goals

Recommendation: 1) receive public input; 2) direct staff to prepare for Council consideration a CDBG application requesting up to \$4,400,000 for sidewalk improvements, \$500,000 for the ProYouth after-

school expanded learning program, and \$100,000 for environmental review for the proposed Wastewater Treatment Plan Upgrade project; and 3) schedule the second Public Hearing for the November 14, 2017 meeting.

City Manager Adams introduced this item.  
Lorie Adams consultant was present.

Action: Motion to direct staff to prepare for Council consideration a CDBG application requesting up to \$4,400,000 for sidewalk improvements, \$500,000 for the ProYouth after-school expanded learning program, and \$100,000 for environmental review for the proposed Wastewater Treatment Plan Upgrade project; and schedule the second Public Hearing for the November 14, 2017 meeting by Cullen and seconded by Victoria.

AYES: Council Members: Mayor LeBarre, Acosta, Cullen, DeLeon and Mayor Pro Tem Victoria

NOES: Council Members:

ABSENT: Council Members:

ABSTAIN: Council Members:

**ADJOURNMENT:**

There being no further business to come before the City Council, Mayor LeBarre adjourned the regular meeting at 7:12pm to regular closed session meeting with the Mayor reading in the closed session items.

1. Liability Claims, by Katherine Dutton  
Claim against City of King  
Gov. Code Section: 54956.95

**Approved Signatures:**

---

Mayor, Michael LeBarre  
City of King

---

City Clerk, Steven Adams  
City of King



**KING CITY**  
C A L I F O R N I A

Item No 9(B)

**REPORT TO THE CITY COUNCIL**

**DATE: SEPTEMBER 12, 2017**

**TO: HONORABLE MAYOR AND MEMBERS OF THE CITY COUNCIL**

**FROM: STEVEN ADAMS, CITY MANAGER**

**BY: PATRICIA GRAINGER, ACCOUNTANT**

**RE: CITY CHECK REGISTER**

---

**RECOMMENDATION:**

It is recommended City Council receive and file.

**BACKGROUND:**

At least once a month, the City Treasurer shall submit to the City Council, a copy of the check register.

**DISCUSSION:**

The purpose of this item is to provide the Council an opportunity to review and monitor ongoing expenditures. These documents are attached.

**COST ANALYSIS:**

There is no fiscal impact as a result of this action.

**ALTERNATIVES:**

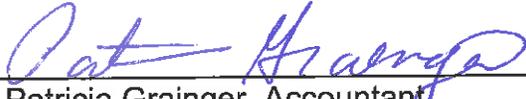
The following alternatives are provided for Council consideration:

1. Receive and file the report; or
2. Provide other direction to staff regarding requests for additional information.

**CITY COUNCIL/CITY  
CITY CHECK REGISTER  
SEPTEMBER 12, 2017  
PAGE 2 OF 2**

**Exhibit(S)**

1. Check Register Report

Submitted by:   
Patricia Grainger, Accountant

Approved by:   
Steven Adams, City Manager

**Check Register Report**

Aug 25, 2017 (FY 2016-17)

Date: 08/25/2017

Time: 9:29 am

Page: 1

KING CITY CITY HALL

BANK: WELLS FARGO BANK

Check Number	Check Date	Status	Void/Stop Date	Vendor Number	Vendor Name	Check Description	Amount
<b>WELLS FARGO BANK Checks</b>							
59495	08/25/2017	Printed		AT & T	AT & T	Monthly Phone -	3,773.21
59496	08/25/2017	Printed		AT&T - C	AT&T	KC Fire - #9391048347	55.71
59497	08/25/2017	Printed		CCMF	CALIFORNIA CITY	2017-18 Individual	400.00
59498	08/25/2017	Printed		CAL WATER	CALIFORNIA WATER SERVICE CO.	Water Service -	21,326.23
59499	08/25/2017	Printed		CAPECC	CAPE	Reg Fee-CAPE Central Coast.	65.00
59500	08/25/2017	Printed		CAROLLO	CAROLLO ENGINEERS, INC	Waste Water Fac Master Plan	8,385.10
59501	08/25/2017	Printed		COASTL	COASTLINE MARKETING GROUP INC	Website Monthly Maint.	125.00
59502	08/25/2017	Printed		DEROTIC	DEROTIC EMERGENCY EQUIPMENT	Built in Battery Charger	620.09
59503	08/25/2017	Printed		FED EXP	FEDEX	FAA A/P Application	28.81
59504	08/25/2017	Printed		GOULD	DIXIE GOULD	Meal Exp - D Gould.	250.00
59505	08/25/2017	Printed		IDCON	ID CONCEPTS, LLC	ID Officer Kenedy, Veleto	38.84
59506	08/25/2017	Printed		KRKC	KING CITY COMMUNICATIONS CORP	Advertising - #253	50.00
59507	08/25/2017	Printed		MASTERSON	ROBERT MASTERSON	Meal Exp - Post STC	246.00
59508	08/25/2017	Printed		MCCLEOA	MCCLEOA	Membership	150.00
59509	08/25/2017	Printed		OFFICE DEP	OFFICE DEPOT	Office Supplies	537.29
59510	08/25/2017	Printed		PETTY CASH	PETTY CASH-PATRICIA GRAINGER	Petty Cash Transactions	321.38
59511	08/25/2017	Printed		PAC	PG&E	Electric & Gas Service -	14,874.19
59512	08/25/2017	Printed		PIT	PITNEY BOWES INC	Replacement Ribbon -	62.93
59513	08/25/2017	Printed		PROYOUTH	PROYOUTH	After School Program -	22,916.66
59514	08/25/2017	Printed		PURCHASE P	PURCHASE POWER*PITNEY BOWES	Postage Refill -	169.65
59515	08/25/2017	Printed		QUALITY CO	QUALITY CODE PUBLISHING LLC	Muni Code Printing	841.08
59516	08/25/2017	Printed		RAINBOW	RAINBOW PRINTING	Business Cards - Acct 133	85.76
59517	08/25/2017	Printed		RANDY	RANDYS JUMPERS	National Night Out -	75.00
59518	08/25/2017	Printed		RED SHIFT	RED SHIFT INTERNET SERVICES	Internet SSL Cert-S/N	179.00
59519	08/25/2017	Printed		ROWE	ALLEN ROWE	Meal Exp-Commuter-Post	263.70
59520	08/25/2017	Printed		SANCHEZJ	JANELLE SANCHEZ	Mileage - IAPE Training	171.28
59521	08/25/2017	Printed		SENTRY	SENTRY	Monthly Alarm System	150.00
59522	08/25/2017	Printed		SO CO NEWS	SO CO NEWSPAPERS	National Night Out.	1,471.44
59523	08/25/2017	Printed		SPACE	SPACETEL LLC	Business Lic Refund	54.42
59524	08/25/2017	Printed		THE SALINA	THE SALINAS CALIFORNIAN	Publi Hearing Notice for	1,795.00
59525	08/25/2017	Printed		TIRE KING	TIRE KING & AUTO EXPRESS	Car Washes - July 2017	335.00
59526	08/25/2017	Printed		TORO	TORO PETROLEUM CORP.	Monthly Gasoline -	3,458.78
59527	08/25/2017	Printed		U.S. BANCO	U.S. BANCORP EQUIPMENT FINANCE	Contract Services -	278.42
59528	08/25/2017	Printed		U.S. BANCO	U.S. BANCORP EQUIPMENT FINANCE	Copier Contract -	330.32
59529	08/25/2017	Printed		U.S. BAN	U.S. BANK CORP PAYMENT SYSTEM	Various Charges -	6,012.97
59530	08/25/2017	Printed		VERIZON WI	VERIZON WIRELESS	Monthly Cell Service -	172.17
59531	08/25/2017	Printed		EDD	EMPLOYMENT DEVELOPMENT DEPT.	Unemployment Insurance -	935.00
59532	08/25/2017	Printed		FED EXP	FEDEX	Acct 1697-6657-6	38.48
59533	08/25/2017	Printed		SVSWA	SALINAS VALLEY SOLID WASTE	Recycling Program	5,000.00
59534	08/25/2017	Printed		ZAPPIA	THE ZAPPIA LAW FIRM, APC	June 2017 Services	3,325.21

**Total Checks: 40**

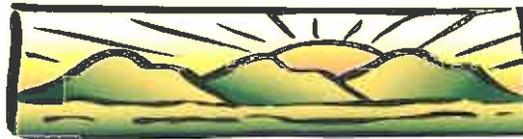
**Checks Total (excluding void checks): 99,369.12**

**Total Payments: 40**

**Bank Total (excluding void checks): 99,369.12**

**Total Payments: 40**

**Grand Total (excluding void checks): 99,369.12**



**KING CITY**  
C A L I F O R N I A

Item No. 9 (C)

**REPORT TO THE CITY COUNCIL**

**DATE: SEPTEMBER 12, 2017**

**TO: HONORABLE MAYOR AND MEMBERS OF THE CITY COUNCIL**

**FROM: STEVEN ADAMS, CITY MANAGER**

**RE: CONSIDERATION OF ADDITIONAL APPROPRIATION FOR CITYWIDE POLICE SECURITY CAMERA PROJECT**

**RECOMMENDATION:**

It is recommended the City Council: 1) approve an additional appropriation of \$9,200 from the General Fund for the Citywide Police Security Camera Project; and 2) authorize the City Manager to approve change orders up to \$15,000 for the SurveillanceGRID Integration, Inc. agreement.

**BACKGROUND:**

The City Council approved a contract with SurveillanceGRID Integration, Inc. at the February 28, 2017 meeting for design, equipment and installation of a police security camera system. Installation of an extensive citywide security camera system was established as a key goal in the Comprehensive Plan to End Youth Violence. The system installation has been delayed awaiting approvals from PG&E to install some of the cameras on light poles they own. Approval of an agreement with PG&E was finalized on August 30<sup>th</sup> so the project is now proceeding.

**DISCUSSION:**

The most complex task in planning for this system has been design of the communications system that will allow the video to be transmitted to the Police Station and recorded. Telecommunications equipment is being installed at three locations, which include the tall building on the Rava Ranches property, a tower installed at the Police Station property, and the Topo building at the Salinas Valley Fairgrounds. However, some additional costs have been incurred that

**CITY COUNCIL  
CONSIDERATION OF ADDITIONAL APPROPRIATION FOR CITYWIDE  
POLICE SECURITY CAMERA PROJECT  
SEPTEMBER 12, 2017  
PAGE 2 OF 2**

were not originally anticipated, which include the installation of the tower at the Police Station, engineering work necessary to obtain a license from the Salinas Valley Fairgrounds to utilize their premises, and equipment for mounting the equipment on the Rava building.

**COST ANALYSIS:**

The Capital Improvement Program approved by City Council for FY 2017-18 included \$439,500 for the security camera system. The agreement with SurveillanceGRID Integration, Inc. is for an amount not to exceed \$433,700. The additional cost for the project is approximately \$13,700. Therefore, an additional \$7,900 is needed. It is recommended to appropriate \$9,200 and authorize the City Manager to approve total change orders up to \$15,000 in case any other minor items are determined necessary during project installation. Staff anticipates there will be sufficient revenue from this expense from additional parcels that are being recommended for sale adjacent to the wastewater treatment plant.

**ENVIRONMENTAL REVIEW:**

The appropriation is not considered a project for the purposes of CEQA and has no potential for resulting in either a direct or indirect impact to the environment.

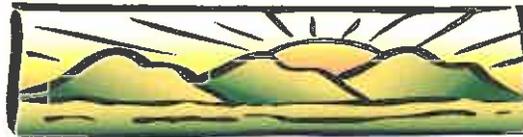
**ALTERNATIVES:**

The following alternatives are provided for City Council consideration:

1. Approve staff's recommendation;
2. Do not approve the appropriation and request staff to reduce the number of cameras in order to keep the project within the original contract and budgeted amount; or
3. Provide staff other direction.

Prepared and Approved by:

  
\_\_\_\_\_  
Steven Adams, City Manager



**KING CITY**  
C A L I F O R N I A

Item No. 9(D)

**REPORT TO THE CITY COUNCIL**

**DATE: SEPTEMBER 12, 2017**

**TO: HONORABLE MAYOR AND MEMBERS OF THE CITY COUNCIL**

**FROM: OCTAVIO HURTADO, HANNA & BRUNETTI, CITY ENGINEERS**

**RE: CONSIDERATION OF AGREEMENT WITH MONTEREY COUNTY WATER RESOURCE AGENCY TO PARTICIPATE IN THE SALINAS RIVER MAINTENANCE PROGRAM AGREEMENT AND THE SALINAS RIVER CHANNEL STREAM MAINTENANCE PROGRAM'S RIVER MANAGEMENT UNIT ASSOCIATION, INC.**

**RECOMMENDATION:**

It is recommended City Council: 1) adopt Resolution No. 2017-4603 approving an Agreement to participate in the Salinas River Stream Maintenance Program between the City of King City and Monterey County Water Resource Agency (MCWRA) and authorizing the City Manager to execute said Agreement; and 2) approve an Agreement between the City of King City and the Salinas River Channel Stream Maintenance Program's River Management Unit Association, Inc. and authorize the City Manager to execute the Membership Form; and 3) appropriated \$4,050 for the fees.

**BACKGROUND:**

A component of the Salinas River Stream Maintenance Program is to remove sediment along the San Lorenzo Creek. Maintenance of the San Lorenzo Creek Channel is a high priority to the City due to potential flooding during major storms. Sediment has built up over the years reducing the flow capacity of the creek. To help minimize the damage to adjacent properties along the San Lorenzo Creek, MCWRA has obtained environmental permits to perform various maintenance activities with the Salinas River and the San Lorenzo Creek. These permits consist of the U.S Army Corps of Engineers (USACE) General 404 Permit and the State of California Regional Water Quality Control Board (RWQCB) 401 Water Quality Permit. These permits restrict the activities

**CITY COUNCIL  
CONSIDERATION OF AGREEMENT WITH MONTEREY COUNTY WATER  
RESOURCE AGENCY TO PARTICIPATE IN THE SALINAS RIVER  
MAINTENANCE PROGRAM AGREEMENT AND THE SALINAS RIVER  
CHANNEL STREAM MAINTENANCE PROGRAM'S RIVER MANAGEMENT  
UNIT ASSOCIATION, INC.**

**September 12, 2017**

**PAGE 2 OF 4**

performed within the Salinas River and the San Lorenzo Creek by the adjacent property owners.

MCWRA has developed a multi-year program and acquired all necessary permits allowing property owners to perform maintenance activities in the Salinas River and the San Lorenzo Creek. MCWRA is requesting property owners to sign a 10-year agreement stating that they will abide by the permits referenced above and allow access to MCWRA staff for monitoring purposes.

The Permits allow for 2000 Cubic Yards of sediment to be removed within this permit year. The City prepared and submitted a work plan to remove sediment and transport it along the creek bed to a site upstream. The site is in the process of being sold, but the City will retain rights to place sediment associated with this program.

**DISCUSSION:**

MCWA is proposing that Council approve the attached Agreement to participate in the Salinas River Maintenance Program. The purpose of said agreement is to ensure compliance with the terms and conditions of the U.S. Army Corps of Engineers' 404 Permit, State Regional Water Quality Control Board 401 Certification and the Program Guidelines. Relevant provisions of the Agreement are as follows:

1. Responsible Party shall defend, indemnify and hold harmless the MCWRA, the County of Monterey, and their respective agents, officers and employees from any and all claims, liability, loss, injury or damage, actual or alleged, arising in connection with subject stream maintenance work. The responsible Party's defense and indemnity obligations shall specifically include any responsibility that the MCWRA or the County of Monterey could have for the attorneys' fees and costs of an opposing party.
2. Participant shall complete and submit by January 15<sup>th</sup> an Annual Site Report that summarizes any site work conducted during the preceding calendar year. This report shall include before and after photographs showing site conditions.

**CITY COUNCIL  
CONSIDERATION OF AGREEMENT WITH MONTEREY COUNTY WATER  
RESOURCE AGENCY TO PARTICIPATE IN THE SALINAS RIVER  
MAINTENANCE PROGRAM AGREEMENT AND THE SALINAS RIVER  
CHANNEL STREAM MAINTENANCE PROGRAM'S RIVER MANAGEMENT  
UNIT ASSOCIATION, INC.**

**September 12, 2017**

**PAGE 3 OF 4**

**COST ANALYSIS:**

The City will be responsible for performing maintenance activities within the San Lorenzo Creek, which consist of removing up to 2000 CY of sediment. The City is in the process of obtaining bids for this work. Funding was included in the FY2017-18/FY2018-19 Biennial Budget for this work.

The City will be responsible for paying cost of Biological monitors/Inspectors during operations performed in the creek.

The City is responsible for the association costs for the San Lorenzo Creek sediment removal this year. Its share of the Salinas River Maintenance Association 2017 fees this year are \$4,050.00. This was an unanticipated fee. Therefore, an additional appropriation is necessary.

**ENVIRONMENTAL REVIEW:**

Work shall be subject to the above mentioned permits and restrictions.

**ALTERNATIVES:**

The following alternatives are provided for Council consideration:

1. Approve staff's recommendations;
2. Delay work until next year;
3. Do not approve Resolution No. 2017-4603 and do not join the Salinas River Channel Stream Maintenance Program's River Management Unit Association, Inc.
4. Provide other direction to staff.

**Exhibits:**

1. Resolution 2017-4603
2. Salinas River Stream Maintenance Agreement
3. Salinas River Channel Stream Maintenance Program's River Management Unit Association, Inc. – Landowner Membership Form.
4. Bylaws of the Salinas River Channel Stream Maintenance Program's River Management Unit Association, Inc.
5. Membership Invoice

**CITY COUNCIL  
CONSIDERATION OF AGREEMENT WITH MONTEREY COUNTY WATER  
RESOURCE AGENCY TO PARTICIPATE IN THE SALINAS RIVER  
MAINTENANCE PROGRAM AGREEMENT AND THE SALINAS RIVER  
CHANNEL STREAM MAINTENANCE PROGRAM'S RIVER MANAGEMENT  
UNIT ASSOCIATION, INC.**

**September 12, 2017**

**PAGE 4 OF 4**

Submitted by:



\_\_\_\_\_  
Octavio Hurtado, Hanna & Brunetti, City Engineers

Approved by:



\_\_\_\_\_  
Steven Adams, City Manager

## RESOLUTION No. 2017-4603

**A RESOLUTION OF THE CITY OF CITY COUNCIL OF THE CITY OF KING CITY APPROVING AN AGREEMENT BETWEEN THE CITY OF KING CITY AND MONTEREY COUNTY WATER RESOURCE AGENCY TO PARTICIPATE IN THE SALINAS RIVER MAINTENANCE PROGRAM AND AUTHORIZING THE CITY MANAGER TO EXECUTE SAID AGREEMENT AND CONSIDERATION OF AGREEMENT BETWEEN THE CITY OF KING CITY AND THE SALINAS RIVER CHANNEL STREAM MAINTENANCE PROGRAM'S RIVER MANAGEMENT UNIT ASSOCIATION, INC. AND AUTHORIZING THE CITY MANAGER TO EXECUTE MEMBERSHIP FORM AND PAY ASSOCIATED FEES**

---

**RESOLVED**, by the City Council of the City of King, California, that

**WHEREAS**, The Monterey County Water Resources Agency has developed a program and acquired all necessary permits to undertake a large-scale, multi-year program to allow property owners to perform maintenance activities within the Salinas River and the San Lorenzo Creek, and

**WHEREAS**, the San Lorenzo Creek has accumulated sediment over the years reducing its flow capacity, and

**WHEREAS**, sediment removal within the San Lorenzo Creek can reduce the potential of damage to the City, and

**WHEREAS**, the terms of this agreement shall be from 2016-2025 for maintenance, inspection, and monitoring purposes, and

**WHEREAS**, the City will be responsible for the cost and performance of the sediment removal and required to abide by the environmental permits outlined in the agreement, and

**WHEREAS**, the proposed agreement is fair and in the best interest of the City.

**NOW, THEREFORE, IT IS ORDERED AS FOLLOWS:**

1. That the Agreement to Participate in the Salinas River Maintenance Program between the City of King City and Monterey County Water Resource Agency, a copy of which is attached hereto as Exhibit A and by reference incorporated herein, is hereby approved and the City Manager is authorized and directed to execute the same on behalf of the City.
2. That the City Manager is directed to join the Salinas River Channel Stream Maintenance Program's River Management Unit Association, Inc. and pay associated fees.

**PASSED AND ADOPTED** by the City Council of the City of King at a regular meeting duly held on the 12th day of September, 2017, by the following vote:

**AYES**, and in favor thereof, Councilmembers:

**NAYS**, Councilmembers:

**ABSENT**, Councilmembers:

**ABSTAINING**, Councilmembers:

---

Mike LeBarre, Mayor

**ATTEST:**

---

Steven Adams, City Clerk

**APPROVED AS TO FORM:**

---

Shannon Chaffin, City Attorney

**SALINAS RIVER STREAM MAINTENANCE PROGRAM**  
**INSTRUCTIONS FOR COMPLETION OF THE AGREEMENT**  
**BETWEEN**  
**PARTICIPANT AND MCWRA**

**PURPOSE OF FORM**

The purpose of the *Salinas River Stream Maintenance Program Agreement Between Applicant and MCWRA* is to insure compliance with the terms and conditions of the U.S. Army Corps of Engineers' 404 Permit, State Regional Water Quality Control Board 401 Certification and the Program Guidelines. The *Agreement* must be signed and submitted to the MCWRA prior to work authorization.

**TERMS AND DEFINITIONS**

- **RMU:** River Management Unit along the Salinas River, from River Mile 94 to River Mile 2. The RMUs encompass the entire river channel width from bank to bank.
- **Maintenance Area:** Designated work areas outside of the low flow channel. These are numbered and refer to the RMU Site Plan.

**INSTRUCTIONS**

- Carefully review the terms of the *Agreement*. Print the property owner and lessee name (if applicable) on page 1 of the *Agreement*. Have all parties sign and date page 6 to indicate your acceptance of the terms of the *Agreement*. If you have questions regarding the *Agreement*, please contact MCWRA at (831) 755-4860.

**FORM SUBMITTAL INSTRUCTIONS AND DEADLINES**

- Upon completion, mail two (2) copies of this Agreement to:  
MCWRA  
Attn: John Roitz  
PO Box 930  
Salinas, CA 93902
- Upon approval by MCWRA, a copy will be returned to the applicant for their file.
- All application materials should be received by MCWRA as soon as possible. Authorization will be granted based on available time and order of receipt.



**SALINAS RIVER STREAM MAINTENANCE PROGRAM  
AGREEMENT**

**Monterey County Water Resources Agency  
and  
Participants in the Stream Maintenance Program**

A. This Agreement is entered into between the Monterey County Water Resources Agency (MCWRA), and \_\_\_\_\_ [and \_\_\_\_\_] hereinafter called Responsible Party/ies (also known as "Participants") (hereafter, the singular form "Party" includes the plural "Parties").

B. WHEREAS, Responsible Party has requested to participate in the MCWRA program titled Salinas River Stream Maintenance Program (2016-2025) SMP Regional General 404 Permit and 401 Water Quality Certification which identifies and conditions restoration and/or repair work on real property owned by or under control of Responsible Party as shown in the RMU Site Plan attached hereto and incorporated herein by this reference; and

C. WHEREAS, the MCWRA has secured the 404 Permit No. 22309S dated September 29, 2016 from the U.S. Army Corps of Engineers (USACE); and 401 Water Quality Certification No. 32716WQ02 dated August 31, 2016 from the State of California Regional Water Quality Control Board (RWQCB), San Luis Obispo, for work identified in the attached RMU Site Plan.

**NOW, THEREFORE**, in consideration of MCWRA obtaining permits referenced herein, and to participate in the SMP being permitted, Responsible Party hereby agrees as follows:

1. Responsible Party agrees to comply with all terms, conditions, and requirements identified in or resulting from the USACE Regional General 404 permit, the RWQCB 401 Water Quality Certification, and any applicable Department of Fish and Wildlife Section 1600 Streambed Alteration Agreement and all conditions set forth or referenced in this Agreement and in the Stream Maintenance Program Guidelines. Responsible Party will supply a copy of the Section 1600 permit to the MCWRA upon request.
2. Responsible Party shall obtain each and every permit, license, approval and permission necessary or required under Federal, State, Local and regulation prior to initiation of project activity.

authorized under this permit, or the actual or alleged failure of Responsible Party to act in accordance with the requirements set forth in this Agreement. It is the intention of the Responsible Party and the MCWRA that these provisions be given the broadest possible interpretation in favor of indemnification, and where more than one interpretation can be reached, the one favoring the broadest defense and indemnity shall apply. The terms and conditions of this Section shall survive the expiration or termination of this Agreement.

7. MCWRA and the County of Monterey are not responsible for any aspect of the subject stream maintenance work, including the quality and adequacy of the design or construction, nor does MCWRA guarantee the performance of any work described herein. MCWRA and the County of Monterey are not responsible for any aspect of compliance or noncompliance with the requirements of the state or federal Endangered Species Acts or the U.S. Fish & Wildlife Service and the National Marine Fisheries Service concurrence letters and Biological Opinions referenced in the MCWRA's USACE 404 Permit, including, without limitation, the performance of biological surveys and environmental mitigation of any kind. Responsible Party shall legally and safely dispose of all material. Cut and dredged material will be disposed of in accord with all applicable laws and regulations, and after securing all applicable permits, licenses and approvals for doing so, and shall maintain comprehensive documentation of compliance with such requirements. The terms and conditions of this Section shall survive the expiration or termination of this Agreement.
8. Work will be conducted during the dry period (typically as early as June 1 -- November 15) of each year. It is understood and agreed that the time period for completing all stream maintenance work authorized hereunder ends on November 15<sup>th</sup> of each year.
9. Participant shall complete and submit by January 15<sup>th</sup> an Annual Site Report that summarizes any site work conducted during the preceding calendar year. This report shall include before and after photographs showing site conditions. The terms and conditions of this Section shall survive the expiration or termination of this Agreement.
10. All work performed under this Agreement shall be confined to properties shown in the RMU Site Plan. Work under this Agreement shall be limited to the following (as subject to Items 10-17 of this Agreement):
  - 10.1. Vegetation maintenance to include mechanical or manual removal of native vegetation within maintenance areas or approved access ways only. This is allowed annually during the work period.
  - 10.2. Sand and sediment management including smoothing with blade in maintenance areas.

- 10.3. Sand and sediment removal limit of 554,420 cubic yards each year.
  - 10.4. Removal of non-native invasive species using an approved method to ensure the efficacy. Retreatment is required until the target success rate is achieved and shall survive the termination or expiration of this Agreement.
11. Participant shall comply with all conditions of the California Regional Water Quality Control Board (CRWQCB) Water Quality Certification No 32716WQ02, dated August 31, 2016. A copy of Certification No.327156WQ02 is attached and incorporated by this reference.
- 11.1. Copies of the Certification and this Agreement must: 1) be available at the Project site during construction for review by personnel and agencies; and 2) be provided to the contractor, subcontractors, consultants who will work at the Project Site. All personnel performing work on the Project shall be familiar with the content of the Certification and its available location on the Project site.
12. Low Flow Channel: Limited work will be conducted in the low flow channel or in any standing or flowing water. When maintenance area connects to the low flow channel it is referred to as a tie-in. Native vegetation removal in these tie-ins must be limited to smaller "punctures" with a maximum of 4 punctures each tie in up to 15ft wide. The rest of the tie-in is considered an avoidance area. All Arundo within the tie-in area can be removed. Low flow channel crossing locations for limited equipment access will be clearly marked with stakes and yellow flagging and will be limited to one per site.
13. Vegetation Removal: For native plant species, methods selected for vegetation removal will leave the roots intact where possible. Non-native invasive species will be completely destroyed and removed from the river channel, mulched in place to an acceptable size, or treated with Aquamaster (glyphosate), imazapyr, or tricolpyr herbicides in place.
14. Sediment Removal/Smoothing: Grading will only be allowed inside the maintenance areas. The slope must be that water will flow downstream. No grading will occur in the low flow channel unless it is in a designated Selective Treatment Area.
15. Any required re-vegetation will be conducted using only native vegetation similar to that removed, such as Cottonwood, Sycamore and Alder.
16. Biological Monitoring must be adhered to as outlined in the permits and ESA consultations.
17. Rain Event Work Restrictions must be adhered to as outlined in the permits.

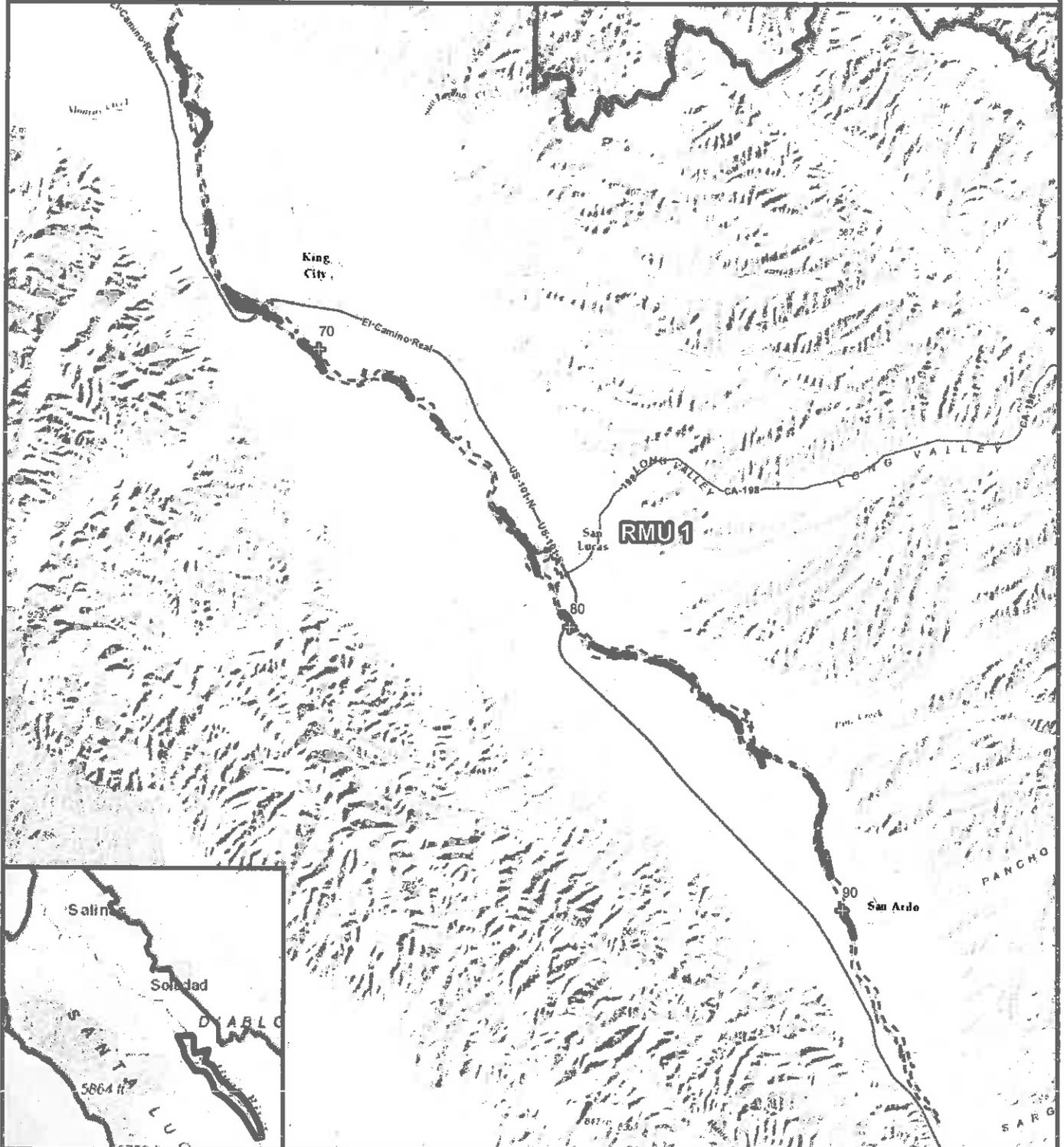
18. Should the Participant conduct activities outside the allowed permit scope or desire to cease or abandon all or part of the work commenced pursuant to this Agreement, it is understood and agreed that MCWRA may require Participant to restore subject site.
19. Responsible Party agrees that any transfer of property on which work has been or is to be conducted pursuant to this Agreement shall be expressly conditioned on the transferee's execution of this Agreement. Failure of Responsible Party to obtain transferee's consent to the terms of this Agreement shall be grounds for suspension or revocation of authorization to proceed with work on the subject property at MCWRA's discretion.

**Certification:** Responsible Party represents and warrants that he or she has read and understood all of the conditions and requirements of this Agreement and of the 404 Permit and 401 Certification under which this Agreement is issued. Responsible Party will provide a copy of the requirements and conditions of the Agreement, 404 Permit, and 401 Certification to its contractors, agents, employees, and representatives working in the area. Responsible Party will incorporate all said requirements into agreements with consultants, contractors, and others working in the subject areas and require them to comply with these conditions.

**IN WITNESS WHEREOF**, the Parties hereto have executed this Agreement as of the day and year written below:



Salinas River Stream Maintenance Program  
Individual River Management Units



Monterey County Water Resources Agency  
Operations & Maintenance Division



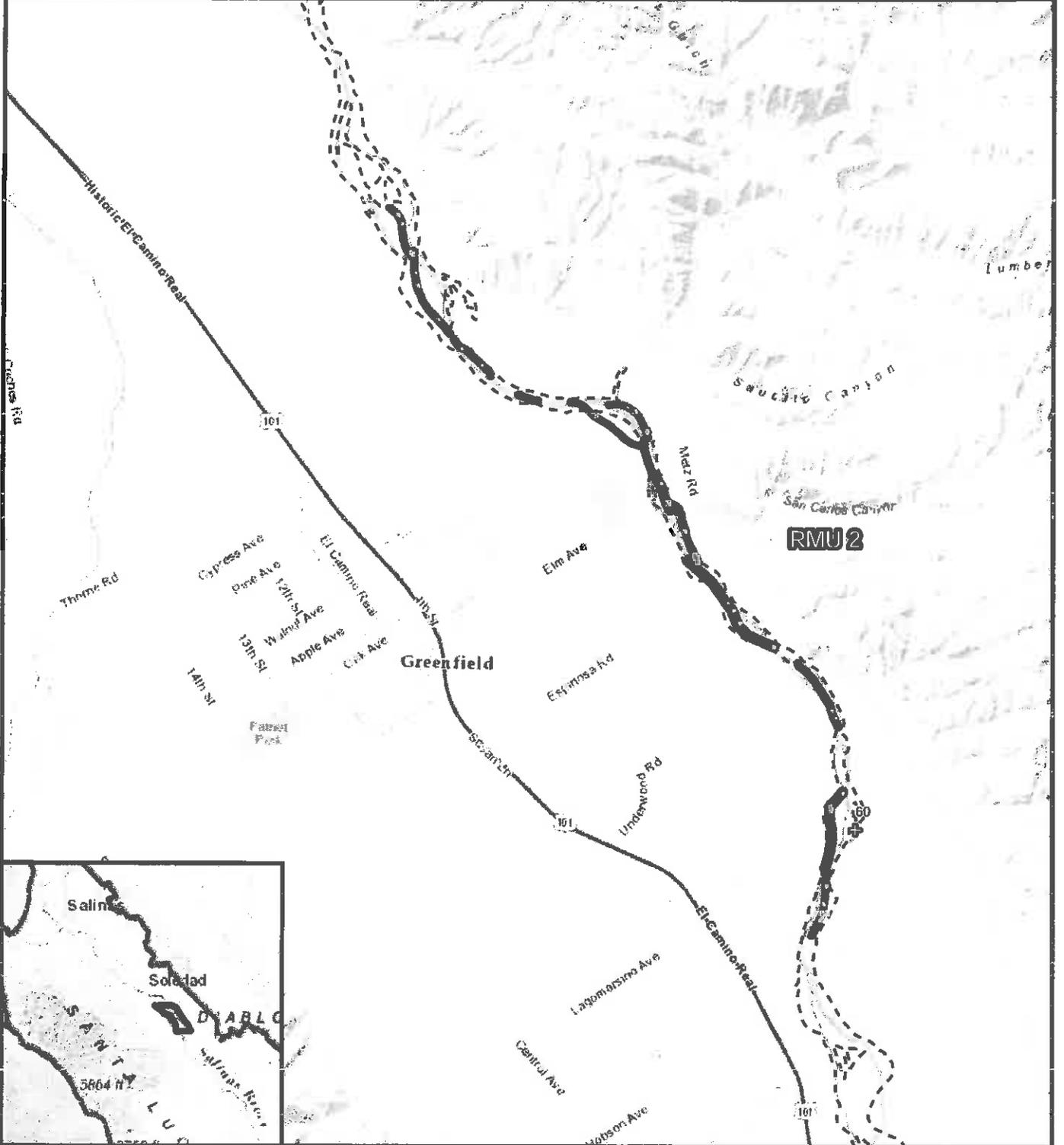
-  Maintenance Areas
-  Ordinary High Water Mark
-  River Miles



The scale and configuration of all project boundaries and information shown herein are not intended as a guide for design or survey work.

Image Source: ESRI (2016)  
Map prepared: 12/9/2015  
Map revised: 3/25/2016

Salinas River Stream Maintenance Program  
Individual River Management Units



**RMU 2**

Monterey County Water Resources Agency  
Operations & Maintenance Division



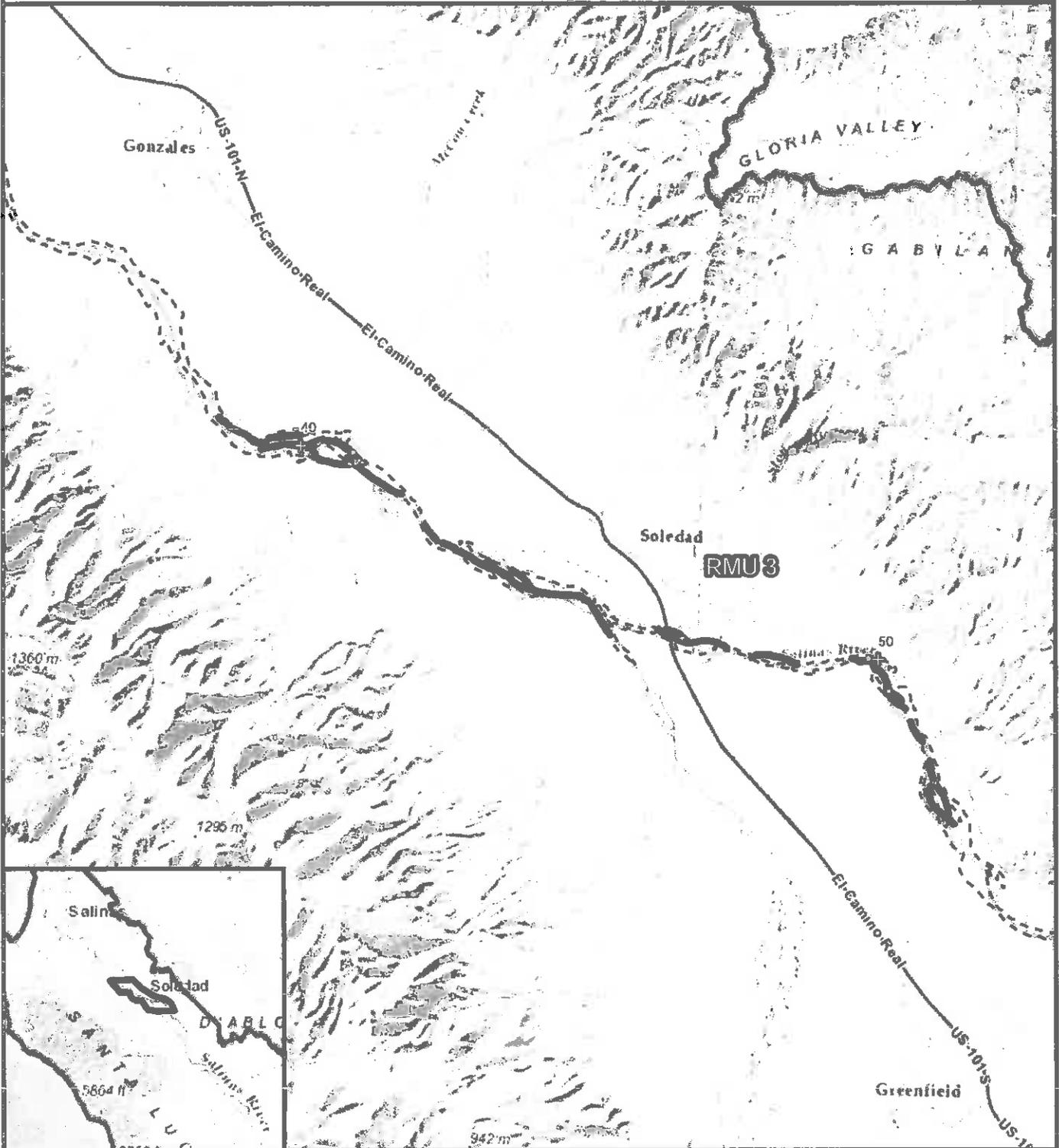
-  Maintenance Areas
-  Ordinary High Water Mark
-  River Miles



The scale and configuration of all project boundaries and information shown herein are not intended as a guide for design or survey work.

Image Source: ESRI (2016)  
Map prepared: 12/9/2015  
Map revised: 3/25/2016

Salinas River Stream Maintenance Program  
Individual River Management Units



Monterey County Water Resources Agency  
Operations & Maintenance Division



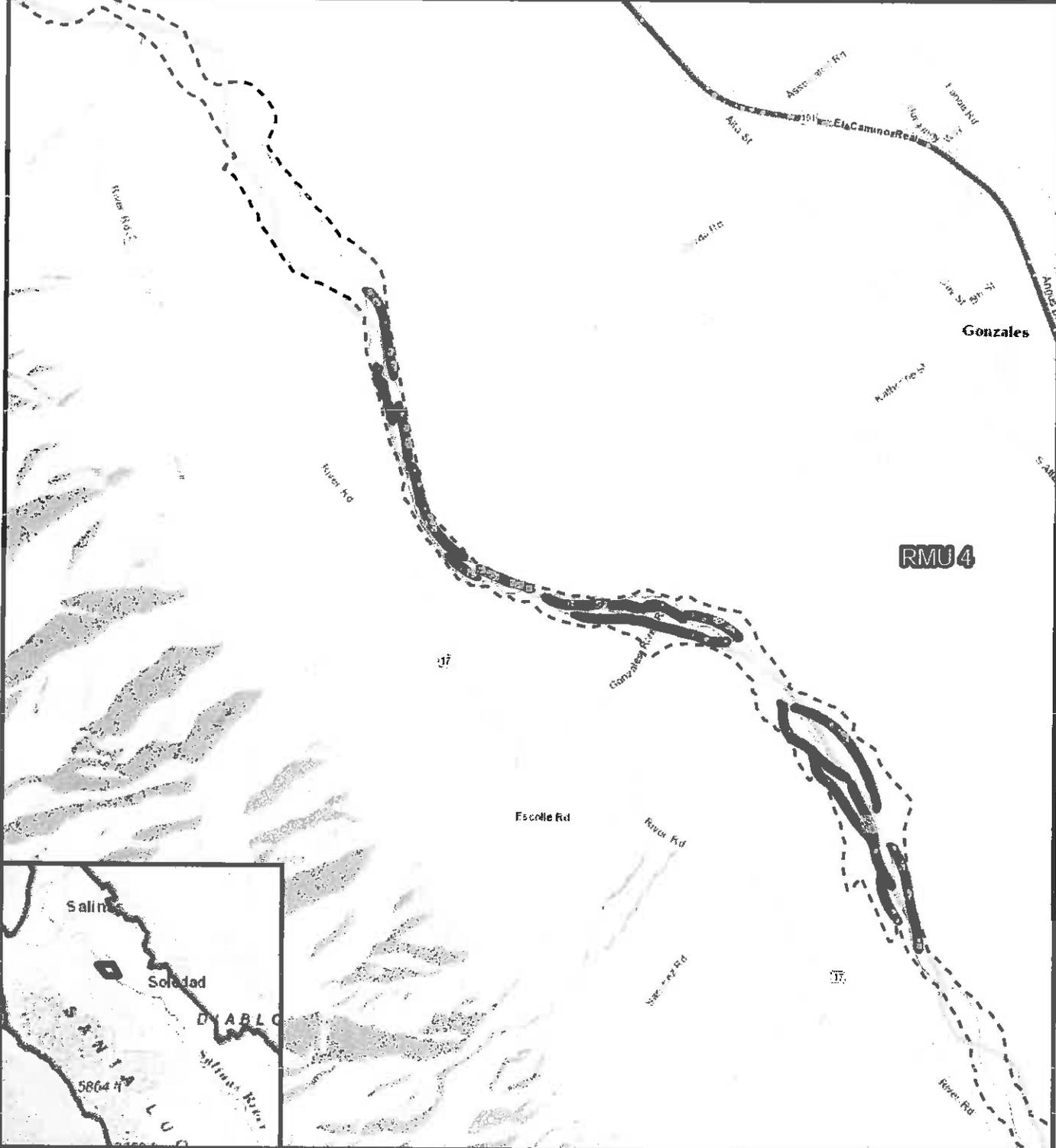
The scale and configuration of all project boundaries and information shown herein are not intended as a guide for design or survey work.

Image Source: ESRI (2016)  
Map prepared: 12/9/2015  
Map revised: 3/25/2016

-  Maintenance Areas
-  Ordinary High Water Mark
-  River Miles



Salinas River Stream Maintenance Program  
Individual River Management Units



Monterey County Water Resources Agency  
Operations & Maintenance Division



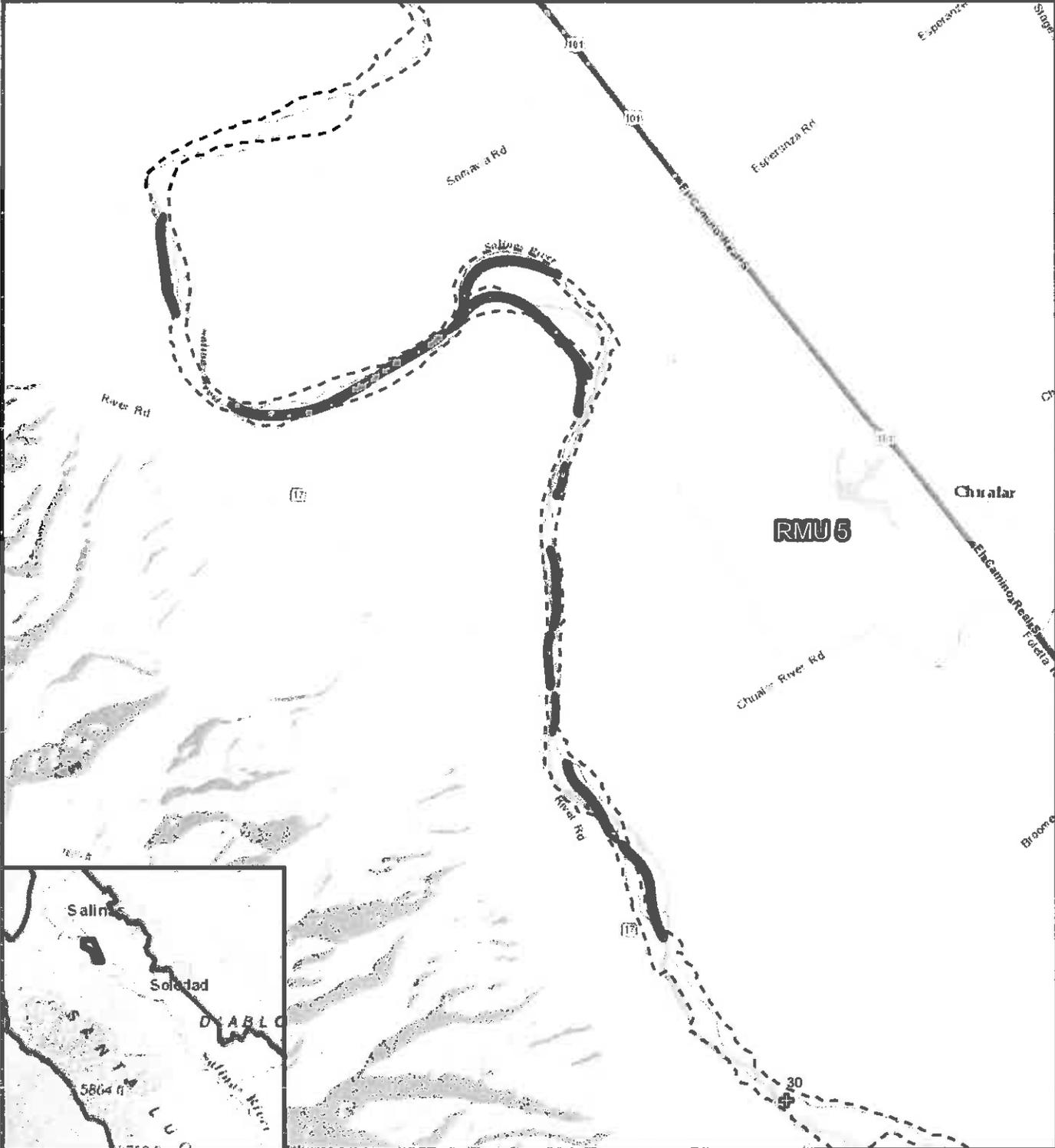
The scale and configuration of all project boundaries and information shown herein are not intended as a guide for design or survey work.

Image Source: ESRI (2016)  
Map prepared: 12/9/2015  
Map revised: 3/25/2016

-  Maintenance Areas
-  Ordinary High Water Mark
-  River Miles



Salinas River Stream Maintenance Program  
Individual River Management Units



Monterey County Water Resources Agency  
Operations & Maintenance Division



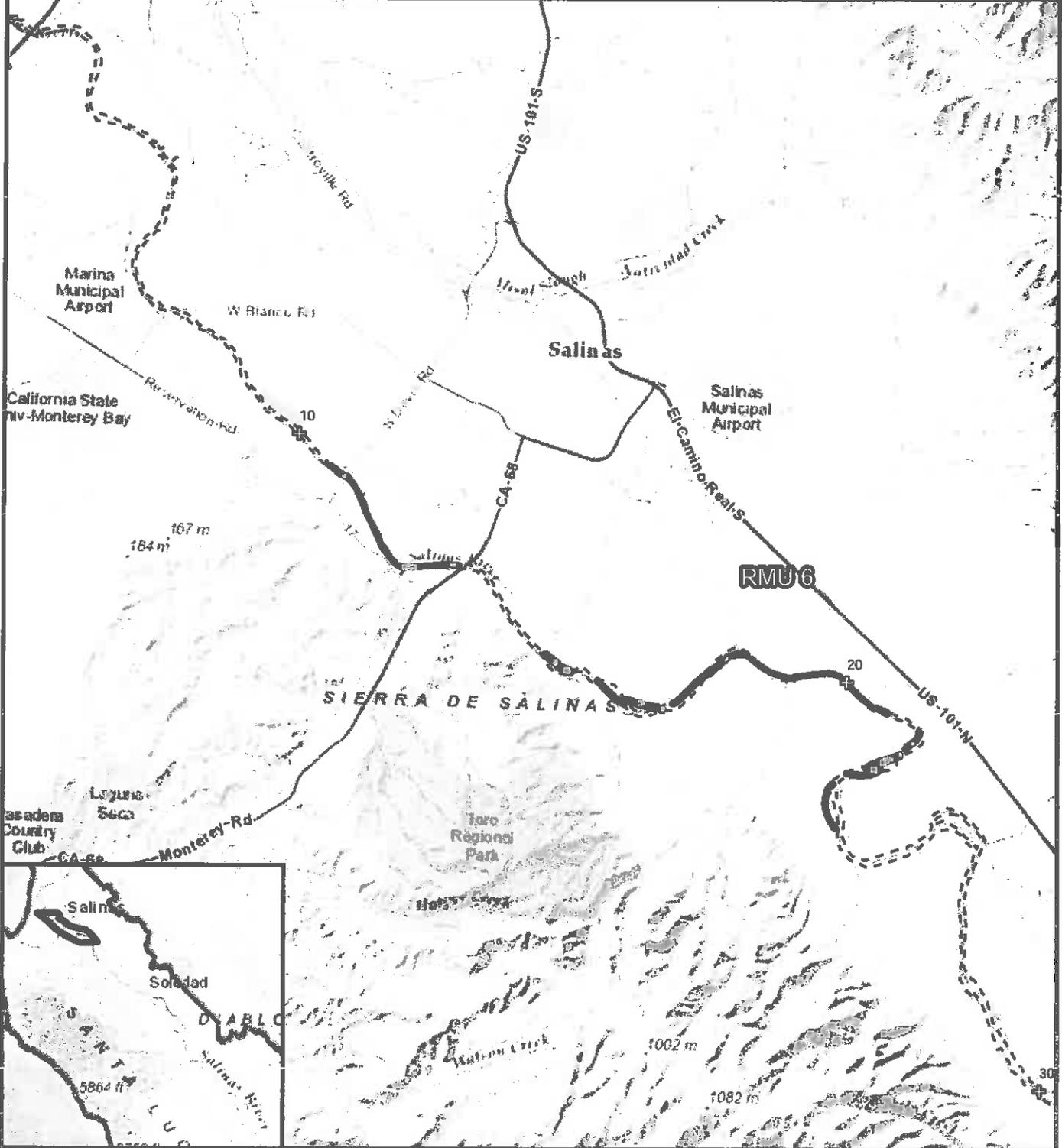
-  Maintenance Areas
-  Ordinary High Water Mark
-  River Miles



The scale and configuration of all project boundaries and information shown herein are not intended as a guide for design or survey work.

Image Source: ESRI (2016)  
Map prepared: 12/8/2015  
Map revised: 3/25/2016

Salinas River Stream Maintenance Program  
Individual River Management Units



Monterey County Water Resources Agency  
Operations & Maintenance Division



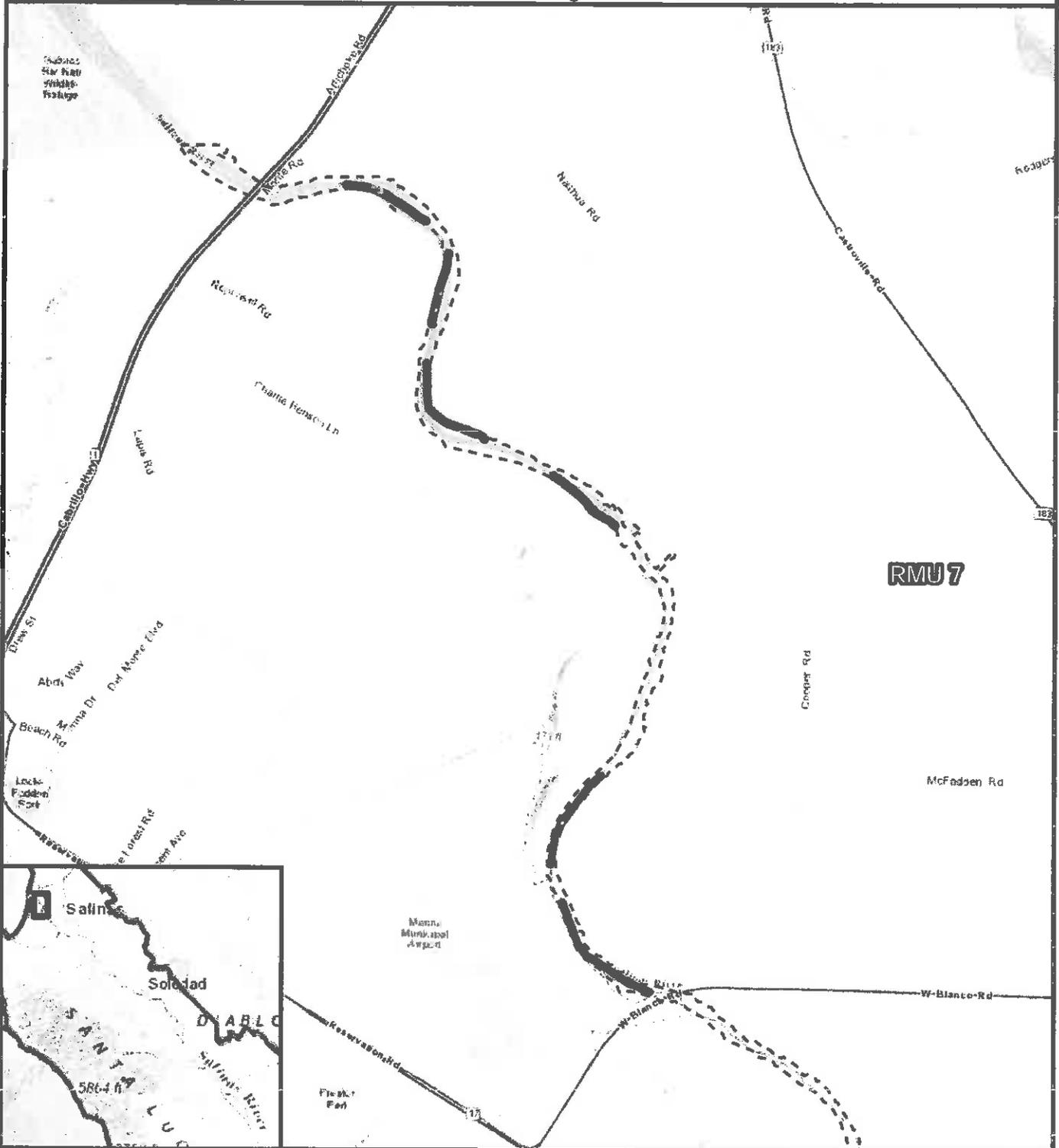
- Maintenance Areas
- Ordinary High Water Mark
- River Miles



The scale and configuration of all project boundaries and information shown herein are not intended as a guide for design or survey work.

Image Source: ESRI (2016)  
Map prepared: 12/9/2015  
Map revised: 3/25/2016

Salinas River Stream Maintenance Program  
Individual River Management Units



**RMU 7**

Monterey County Water Resources Agency  
Operations & Maintenance Division



The scale and configuration of all project boundaries and information shown herein are not intended as a guide for design or survey work.

Image Source: ESRI (2016)  
Map prepared: 12/9/2015  
Map revised: 3/25/2016

-  Maintenance Areas
-  Ordinary High Water Mark
-  River Miles





**DEPARTMENT OF THE ARMY**  
**SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS**  
**1455 MARKET STREET**  
**SAN FRANCISCO, CALIFORNIA 94103-1388**

**DEPARTMENT OF THE ARMY REGIONAL GENERAL PERMIT 20**  
**FOR THE**  
**SALINAS RIVER STREAM MAINTENANCE PROGRAM**

**PERMITTEE:** Monterey County Water Resources Agency (MCWRA)

**CORPS FILE NO.:** 1996-22309S

**ISSUING OFFICE:** San Francisco 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 of that office 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:** The Stream Maintenance Program (SMP) includes annual channel maintenance activities within seven designated River Management Units (RMU's) on the Salinas River within Monterey County, from river mile 2 upstream to river mile 94. Work within the RMUs will consist mostly of vegetation management (mowing and discing), sand/sediment management (channel smoothing and excavation), and non-native vegetation removal and herbicide treatment of arundo and tamarisk to reduce risk of flooding to adjacent farm fields and prevent bank erosion. Project activities will create and maintain a series of linear "secondary channels" paralleling the existing low-flow channel and designed to become active during higher flow events (5-year interval or approximately 25,000 cfs). Maintenance activities will generally occur between September 1 and November 15, but limited activities (tree planting and non-native vegetation treatment) could occur prior to September 1.

The proposed locations of secondary channels have been preferentially aligned along meander cutoffs, low-lying undeveloped areas, and former river alignments to mimic the historical braiding of the Salinas River. Most secondary channels will meet, or tie-in with, the low flow channel at upstream and downstream locations as would be expected in a more natural braided river channel. Where possible, tie-ins will be located: (1) to avoid or reduce potential impacts to higher value native vegetation (e.g., riparian or wetland areas); (2) in areas where large patches of arundo are found (i.e., to facilitate non-native species removal); (3) in areas where the bank is already low (e.g., 3-5 feet above the thalweg of the low-flow channel, versus 6-7 feet); (4) at existing bends (to facilitate natural overbank flow at the upstream end); and (5) to avoid potential impacts to adjacent banks via increased scour. Downstream tie-in points will also be positively graded at the area joining the low flow channel to avoid potential fish stranding. In a limited number of cases (<25%), the geomorphology or hydrology of the river may require tie-ins be located in an area requiring removal of larger sized riparian vegetation (e.g., multiple mid-successional willows greater than 6 inches dbh). In those instances, the tie-in will be made through two to four smaller notches ranging from 15-30 feet wide, rather than one larger opening in the riparian corridor that would result in removal of more trees and a larger riparian impact. Pre-construction staking and flagging will also be used to avoid large-trees, riparian vegetation, and wetlands, where possible,

when creating both secondary channels and their connection to the low-flow channel. Areas where arundo dominates the tie-in (> 95% coverage) will be treated to remove all arundo.

In addition to secondary channels, at limited locations within RMUs 6 and 7, vegetation maintenance and sediment removal activities will occur in focused selective treatment areas, rather than in linear secondary channels. The work in these 2 areas will include limbing of trees and sandbar ripping in areas directly adjacent to the thalweg.

The objective of the proposed management activities within these RMUs is to mimic natural braiding in the Salinas River historically provided by higher, scouring flows and especially in secondary channels. The goal is to increase channel complexity, slow velocities in the primary low flow channel, and encourage a wider range of riparian habitat conditions (earlier to later successional vegetation communities) that would have been present historically.

SMP activities will be implemented on a voluntary basis by individual property owners, growers, and municipalities throughout the program area. MCWRA will oversee and coordinate SMP activities, and will also perform SMP maintenance activities within three tributary reaches within the RMUs. Each year, MCWRA, in cooperation with the Monterey County Resource Conservation District (RCDMC) will be responsible for compiling proposed SMP activities into an annual work plan, which will be submitted to the regulatory agencies for approval at least 60 days before the work window begins for the year. At the conclusion of each year's maintenance season, completed SMP activities and mitigation will be documented in an Annual RMU Report developed by MCWRA and submitted to permitting agencies by March 31 of the following year.

**AUTHORIZED WORK:** This Regional General Permit (RGP) can be used to authorize SMP activities in up to 129 potential management areas (secondary channel locations and selective treatment areas) that have been identified throughout the 7 RMU's and 3 tributaries, totaling approximately 875 acres (enclosure 1). The majority of the work within these management areas will be conducted below the Ordinary High Water Mark (OHWM) of the Salinas River or its tributaries, on sediment bars that will be dry at the time of work. Work will avoid impacts to the active/low flow channel to the extent practicable. Maintenance activities will temporarily impact waters of the U.S. through sediment grading or removal. Up to 700 acres of native and non-native vegetation types within the management areas could be disturbed by vegetation management and/or sediment removal under the SMP. An additional 155 acres of unvegetated or bare ground may be temporarily disturbed during sediment grading or removal. Up to 554,420 cubic yards (CY) of sediment could be removed annually under the SMP, but no more than 785,000 CY of sediment can be removed in any two consecutive years. Additionally, no more than 450,000 CY of sediment can be removed from any given 1 mile length of river in the upper reach, and no more than 100,000 CY of sediment could be removed over any 1 mile length of river in the lower reach over a consecutive 2 year period. Sediment will be removed from the secondary channels by truck and moved to either integrate into adjacent farm fields or stored in demarcated stockpile areas above the OHWM and outside of any jurisdictional wetlands. Sediment removal and grading impacts to non-wetland areas are considered temporary impacts because of the dynamic nature of the river system, which is anticipated to shift vegetation and sediments within the floodplain during moderate to high flow events. Note that in RMU's 1-6 USACE jurisdiction is limited to the activities involving grading or other fill discharge below the OHWM and in wetlands. However, RMU 7 is considered Navigable under Section 10 of the Rivers and Harbors Act, and so all work below the OHWM (including vegetation removal) is subject to USACE jurisdiction in this reach. Annual limits on vegetation/grading impacts and sediment removal are summarized in the following table:

**SMP Annual Limits of Sediment and Vegetation Removal**

Area	River Mile <sup>1</sup> (RM)	Sediment Removal Quantity (CY)	Grading and Native Vegetation Removal (Acres)	Non-Native Vegetation Removal
Salinas River Mainstem	2.0 – 21.0	100,000	175	No Limit
	21.0 – 94.0	452,200	640	No Limit
Gonzales Slough	31.6	20	10	No Limit
Bryant Canyon Channel	47.1	200	10	No Limit
San Lorenzo Creek	69.0	2000	10	No Limit
<b>TOTAL</b>		<b>554,420</b>	<b>875</b>	<b>No Limit</b>
<sup>1</sup> In general, RM 2.0 to 21.0 corresponds to RMUs 6 and 7; RM 21.0 to RM 94.0 generally corresponds with RMUs 1 through 5. RM indicated for tributaries reflects the location of the confluence of the tributary with the Salinas River mainstem.				

**PERMIT CONDITIONS:**

**GENERAL CONDITIONS:**

1. The time limit for completing the work authorized ends on November 15, 2021. 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 of 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 cease all work and 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 in accordance with the terms and conditions of your permit.

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

**SPECIAL CONDITIONS:**

1. A detailed annual work plan of the proposed maintenance activities to be performed each year shall be prepared by MCWRA and submitted to USACE at least 60 days prior to the start of the construction season for review and approval. For all proposed maintenance areas, this work plan shall:
  - a. clearly describe and quantify the proposed activities, including the following information for all work below the OHWM: acreage of vegetation removal; acreage of channel smoothing/bar ripping or other grading; volume of sediment removal;
  - b. include pictures of representative sites for the different types of maintenance activities requested;
  - c. include plan drawings/maps identifying proposed channel maintenance locations, including location/extent of all channel smoothing/bar ripping or other grading, staging and channel access routes, and stockpile areas;
  - d. identify Ordinary High Water Mark and any mapped wetland boundaries for all proposed maintenance areas, with a discussion of methods used to field-verify mapped wetlands;
  - e. identify, describe, and quantify any anticipated wetland impacts, with a discussion of efforts to avoid and minimize wetland impacts;
  - f. document field delineation of any impacted wetlands in accordance with USACE 1987 wetland delineation manual and Arid West Regional Supplement;
  - g. identify and describe proposed restoration/mitigation of any wetland impacts, including plan drawings and success criteria for restoration of any temporary wetland impacts, and a mitigation plan consistent with the 2008 Mitigation Rule for any permanent wetland impacts;
  - h. identify any special approaches or conditions to complete the proposed maintenance activities;
  - i. identify any historic or cultural resources that may be impacted by SMP activities;
  - j. include a completed electronic copy of the Impacts sheet and Aquatic Resource sheet in the latest version of the Consolidated ORM Upload Workbook (ORM-Upload\_Sheet\_Consolidated\_Rapanos20151022.xlsm) available at <http://www.spd.usace.army.mil/Portals/13/docs/regulatory/standards/Zip%20file.zip>

Copies of the report may be provided to all appropriate agencies including, but not limited to the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Central Coast Regional Water Quality Control Board (RWQCB), California Department of Fish and Game (CDFG), and Environmental Protection Agency (EPA). At the end of the 30-day review period (or when all comments are received), USACE shall notify MCWRA which projects are verified under this RGP and when project construction may proceed. Based upon these comments, USACE may choose to exclude individual maintenance projects from authorization under the RGP, if any proposed maintenance action would have greater than minimal impacts or unanticipated effects on ESA listed species or historic or cultural resources. Authorization for these projects would need to be processed as a separate request.

2. An annual report on completed projects shall be submitted by March 31 of each year following project activity. This report shall include a description of the work performed, specifically noting any changes that were made in the project design that differs from what was outlined in the pre-construction report, success of invasive plant removal (change in percent cover) and success of native plant species plantings/recolonization (change in percent cover). The report shall also document any permanent fill, including grading, within jurisdictional wetlands and other waters of the U.S. for each project site. This report shall be reviewed by the resource agencies for compliance with the terms of the RGP. Field site visits may be performed, on representative sites, by the employees of these resource agencies, as a part of their compliance evaluation.
3. For temporary impacts to wetlands, the area must be restored to its preconstruction condition upon completion of the maintenance activity, and monitoring and documentation provided to ensure successful restoration.
4. For grading or any other permanent fill impacts to wetlands, or vegetation removal impacts to wetlands in RMU 7 which are subject to RHA Section 10, a mitigation plan which complies with the 2008 mitigation rule must be developed, submitted to USACE for review and approval, and implemented following approval by USACE.
5. Excavated material may be temporarily stockpiled within portions of the maintenance areas already impacted by grading, but must be completely removed from the river channel by November 15 and stockpiled outside the OHWM in areas not subject to USACE jurisdiction.
6. At any time, a meeting may be requested by MCWRA, USACE, or other regulatory agencies to discuss the terms of the permit and compliance with those terms. Based upon the results of these meetings, USACE may choose to revoke or modify the RGP.
7. Sediment management and native vegetation management work will be confined to September 1 through November 15. Management of non-native invasive vegetation may occur as early as August 15 (mechanized removal) or June 1 (herbicide treatment). Tree planting for mitigation may occur year round, subject to seasonal and/or weather-related restrictions.
8. All standard Best Management Practices shall be implemented to prevent the movement of sediment downstream. No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products, or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into the waterways.
9. To remain exempt from the prohibitions of Section 9 of the Endangered Species Act, the non-discretionary Terms and Conditions for incidental take of federally-listed species shall be fully implemented as stipulated in the Biological Opinion titled *Biological Opinion for the Salinas River Stream Maintenance Program, Monterey County, California (2016-F-0318) (Corps file number 22309S)* dated August 22, 2016 (enclosure 2). Project authorization under this permit is conditional upon compliance with the mandatory terms and conditions associated with incidental take. Failure to comply with the terms and conditions for incidental take, where a take of a federally-listed species occurs, would constitute an unauthorized take and non-compliance with the authorization for your project. The USFWS is, however, the authoritative federal agency for determining compliance with the incidental take statement and for initiating appropriate enforcement actions or penalties under the Endangered Species Act.
10. The USFWS and NMFS concurred with the determination that the project is not likely to adversely affect the federally listed San Joaquin kit fox (*Vulpes macrotis mutica*), California tiger salamander

*(Ambystoma californiense)*, yellow-billed cuckoo (*Coccyzus americanus*), Monterey spineflower (*Chorizanthe pungens*), South-Central California Coast steelhead (*Oncorhynchus mykiss*), or designated critical habitat for these species. Their concurrence was premised, in part, on avoidance and minimization measures listed on pages 2-8 of the August 22, 2016 USFWS BO (enclosure 2), and project description on pages 1-4 of the September 6, 2016 NMFS concurrence letter (enclosure 3). Adherence to the project description and avoidance and minimization measures are incorporated as special conditions to the RGP authorization for your project to ensure unauthorized incidental take of species and loss of critical habitat does not occur.

11. To monitor for any unanticipated discoveries of buried cultural resources, you shall have an archaeologist monitor all ground-disturbing activities within the project area. Should any previously unknown cultural resources be identified during project activities, you shall cease work immediately and notify this office. In such a circumstance, USACE will inform the applicant when work may resume.

**FURTHER INFORMATION:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
  - (X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 403).
  - (X) Section 404 of the Clean Water Act (33 U.S.C. Section 1344).
  - ( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. Section 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.



**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.**

\_\_\_\_\_  
(TRANSFEEE)

\_\_\_\_\_  
(DATE)



## 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:  
08EVEN00-2016-I-0318

August 22, 2016

Holly Costa, Acting Chief  
Regulatory Division  
U.S. Army Corps of Engineers, San Francisco District  
1455 Market Street  
San Francisco, California 94103-1398

Subject: Biological Opinion for the Salinas River Stream Maintenance Program, Monterey County, California (2016-F-0318) (Corps file number 22309S)

Dear Ms. Costa:

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 5-year permit, pursuant to Section 404 of the Clean Water Act, to the Monterey County Water Resources Agency (MCWRA) for the second phase of a cooperative planning and flood risk reduction program (Project) encompassing 92 linear miles of the Salinas River and 2 linear miles of several tributaries in Monterey County, California. You have determined that the proposed project is likely to adversely affect the federally endangered least Bell's vireo (*Vireo bellii pusillus*) and tidewater goby (*Eucyclogobius newberryi*) and its critical habitat and federally threatened California red-legged frog (*Rana draytonii*), and may affect, but is not likely to adversely affect, the federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*) and the federally threatened California tiger salamander (*Ambystoma californiense*), Monterey spineflower (*Chorizanthe pungens* var. *pungens*) and its critical habitat, and yellow-billed cuckoo (*Coccyzus americanus*). We received your March 31, 2016 request for informal consultation on April 4, 2016; you subsequently requested formal consultation via email on July 21, 2016. Your request and our response are made in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

We have based this biological opinion on information that accompanied your March 31, 2016 request for consultation, including the biological assessment (BA; MCWRA 2016a), permit application supplemental attachment with Appendix C maps (PSA; MCWRA & RCDMC 2016), and Program Area maps (MCWRA 2016b); the Project final environmental impact report, referenced in the BA (FEIR, MCWRA 2014a); the additional information packet and implementation flow chart (MCWRA 2016c) received on July 5, 2016; and other information in our files. We can make available a record of this consultation at the Ventura Fish and Wildlife Office.

**Not Likely to Adversely Affect Determinations**

You have determined that the proposed project may affect but is not likely to adversely affect the San Joaquin kit fox, California tiger salamander, Monterey spineflower and its critical habitat, and yellow-billed cuckoo. Data supporting this conclusion include observations made during reconnaissance level surveys in winter 2014 (River Management Units (RMU) 4 and 5 only) and spring and summer 2015, CNDDDB occurrence data, relevant literature, and information provided by regional species experts and resource agencies. You have made your determination based on the low likelihood that these species and critical habitat will be present during and affected by Project activities and the limited availability of suitable habitat in the action area. To further reduce the likelihood of adverse effects, you have proposed the avoidance and minimization measures detailed below.

***San Joaquin kit fox***

San Joaquin kit fox have been reported as far north as river mile 47 of the Salinas River system at the northern boundary of RMU 2 (CNDDDB 2016). Occurrences within the Project area date to 1975, while the most recent nearby occurrences are from Espinosa Canyon just west of the Salinas River in San Lucas (2002) and Pinalito Canyon approximately 7.5 miles northeast of the River near King City (1988). Habitat in RMUs 1, 2 and 3 provides moderate suitability for cover and foraging. Reconnaissance surveys did not identify potential burrow sites within proposed work areas and no San Joaquin kit fox sign was detected. Many farms adjacent to the Project area are enclosed by wildlife-impermeable fencing, reducing the ability of kit foxes to enter work areas from adjacent foothills, though several tributaries and isolated upland locations could provide movement corridors between the Salinas River and upland habitat. If San Joaquin kit fox were to use the Salinas River corridor it would most likely be for hunting and dispersal and occur at night when Project activities would not take place.

You have proposed the following measures to avoid and minimize adverse effects to the San Joaquin kit fox:

1. Between 30 and 14 days prior to the start of work, a Service-approved biologist will conduct pre-construction surveys for San Joaquin kit fox in all areas of suitable habitat within 200 feet of work areas following Service (2011) guidelines. Surveys will include both new work areas and areas receiving repeat maintenance in subsequent years.
2. Clearly marked exclusion zones will be established around dens found within the project area based on the following criteria: potential den, 50-foot radius; known or occupied den, 100-foot radius; known natal or pupping den, 150-foot radius; occupied natal or pupping den, 200-foot radius.
3. Disturbance to potential San Joaquin kit fox dens will be avoided to the maximum extent practicable. If destruction of a potential den is unavoidable, the Service-approved biologist may destroy the potential den if it is found to be unoccupied after appropriate monitoring.

4. Non-natal San Joaquin kit fox dens that cannot be avoided will be surveyed by a Service-approved biologist for three days to determine if they are occupied. Activity will be monitored by placing tracking medium at the den entrance every morning. Tracking material will be checked twice a day: every morning for tracks, and prior to sundown to ensure that tracking materials have not been damaged or blown away. Alternatively, a motion-triggered camera may be placed near the den entrance for three days.
5. If no San Joaquin kit fox activity is observed during monitoring, non-natal dens that are unavoidable will be physically closed to prevent occupation. If San Joaquin kit fox activity is observed at the unavoidable non-natal den, all activities which may harm kit foxes or affect the den will be halted, and the Service-approved biologist and the Corps will contact the Service immediately for instructions on how to proceed.
6. If a San Joaquin kit fox or kit fox natal den is observed at any time, all activities which may harm kit foxes or affect the den will be halted, and the Service-approved biologist and the Corps will contact the Service immediately for instructions on how to proceed.
7. A Service-approved biologist will provide mandatory worker awareness training for all project personnel before work begins and which includes, at a minimum, the biology, identification, and habitat needs of San Joaquin kit fox and the project conservation measures being taken to protect them.
8. Vehicles will observe a daytime speed limit of 20 mph on all roads in the Project area except county roads and State and Federal highways (nighttime work will not be allowed).
9. Nighttime work will not be allowed.
10. All food-related trash items will be disposed of in secure, closed containers and removed at least once per week to reduce the potential to attract predators and competitors of kit fox.
11. No pets of any kind will be permitted in the project area.
12. Herbicides, pesticides and rodenticides will be utilized in such a manner to prevent primary or secondary poisoning of San Joaquin kit foxes and depleting populations of their prey.
13. Excavated, steep-walled holes or walled trenches more than 2 feet deep will be completely covered at the end of each day by plywood or other materials or provided with escape ramps to prevent entrapment of kit foxes, and inspected for trapped animals before being filled. Pipes, culverts, or similar den-like structures with diameter 4 inches or greater stored overnight will be inspected for animals before being moved, buried, or capped.

*California tiger salamander*

California tiger salamanders have not been documented within the Project area. Occurrences within the species' dispersal distance include a 1991 breeding record approximately 0.66 miles

south of the Salinas River in RMU 4, and 4 vernal pools on the former Fort Ord approximately 1.0 to 1.3 miles southwest of the Salinas River in RMU 6 (CNDDDB 2016, B. Kowalski pers. com.). Areas of intensive row-crop agriculture lacking upland refugial habitat separate these occurrences from the Project area, and a high traffic road is found between the Salinas River and pools on Fort Ord. Suitable breeding habitat does not occur in the Project area. Burrows that could serve as upland refugia were found adjacent to two proposed maintenance areas in RMUs 4 and 5 in 2014 and on higher floodplain terraces in 2015 during reconnaissance surveys. However, none were either within 2 miles of known breeding ponds or located in areas that would likely be accessible by dispersing individuals.

You have proposed the following measures to avoid and minimize adverse effects to the California tiger salamander:

1. A Service-approved biologist will survey work areas no more than 48 hours before the start of work to look for California tiger salamanders and will be present at the start of work. Surveys will occur in work areas located within 2 miles of known or potential breeding ponds, include areas identified for access, staging, and placement of removed sediment, and include new work areas and areas receiving repeat maintenance in subsequent years.
2. A Service-approved biologist will be present throughout all maintenance activities that occur in areas located within 2 miles of known or potential California tiger salamander breeding ponds, if work occurs during periods when salamanders may be active.
3. Each morning before work begins a Service-approved biologist or biological monitor trained by the biologist to identify California tiger salamanders will inspect all vehicles and heavy equipment for the presence of California tiger salamanders in all project areas where salamanders may occur.
4. If any California tiger salamanders are observed, activities which may harm salamanders will stop and the animal will be allowed to leave the area on its own. The Service will be contacted immediately for instructions on how to proceed.
5. Disturbance of emergent vegetation in areas with suitable habitat for California tiger salamanders will be minimized.
6. A Service-approved biologist will conduct mandatory worker awareness training for all Project personnel before work begins and which includes, at a minimum, the biology, identification, and habitat needs of California tiger salamanders and the project conservation measures being taken to protect them.
7. Herbicides will not be applied in areas or during weather where they may drift downwind or be carried via runoff to suitable aquatic or upland habitat for California tiger salamanders. Only herbicides approved for use in aquatic and wetland environments (glyphosate or imazapyr) will be used for non-native vegetation removal. No herbicides will be applied

within 24 hours of forecasted rain or within 24 hours following a rainfall event of 0.25 inches or greater.

8. All walled open trenches and other excavations 6 inches deep or greater in areas of suitable habitat will be covered each night or provided with soil escape ramps to prevent entrapment of California tiger salamanders. A Service-approved biologist or biological monitor trained by the biologist to identify California tiger salamanders will inspect excavations for salamanders prior to work in or around these features and before they are backfilled.
9. Soil stockpile areas will be covered at night or surrounded by exclusion fencing to discourage habitation by animals, and inspected in the morning for California tiger salamanders prior to disturbance.
10. Nighttime work will not be allowed.
11. Work will not occur in water or wetlands and most activities will be conducted outside the wet season when California tiger salamanders are most active. No work will be performed if a rain event of 0.25 inches or greater in a 24-hour period occurs. Construction may resume after precipitation ceases, a drying-out period of 24 hours is observed, and a Service-approved biologist inspects all work areas to verify absence of California tiger salamanders.
12. All food-related trash items will be disposed of in secure, closed containers and removed at least once per week to reduce the potential to attract predators of California tiger salamanders.

*Monterey spineflower*

Monterey spineflowers have been documented within and adjacent to the Project area, in RMU 3 near Soledad just south of the Salinas River channel (2013) and in its tributary the Arroyo Seco (1920), and adjacent to the Salinas River near the Blanco Road crossing in RMU 6 on the former Fort Ord (CNDDDB 2016). An occurrence from the Salinas River valley near San Lucas (RMU 1) dating to 1935 is believed to be extirpated. Habitat information for Monterey spineflower within the Project area is not provided in the BA or FEIR, as this species was not included in the Corps' original consultation request. The FEIR notes that Monterey spineflower is found on sandy soils derived from ancient stabilized dunes in coastal dunes, coastal scrub, and farther inland in maritime chaparral at elevations below 1,475 feet, typically within bare sandy patches with little vegetative cover (MCWRA 2014a). The Monterey spineflower is an annual species that is not believed to develop a persistent soil seed bank (Fox et al. 2006, Service 2009). Suitable habitat would be expected to occur in scattered areas along the Salinas River system, but its location may shift with changes in hydrology, vegetation, and sediment deposition. Occurrences of this species in the Project area, especially below the ordinary high water mark where most activities would occur, may thus be subject to substantial long-term turnover and shifts in distribution and size (Service 1998a).

***Monterey spineflower critical habitat***

A very small portion of Monterey spineflower designated critical habitat Unit 9 (Soledad Unit) overlaps the Project area between approximately Salinas River miles 48.7 and 50.4. Unit 9 represents the southernmost interior location that supports a population of Monterey spineflower and the only critical habitat unit where the species grows in interior floodplain dune habitat (Service 2008). Unit 9 contains the physical and biological feature<sup>1</sup> (PBF) essential to the conservation of the species: a vegetation structure with openings between the dominant plants that changes in spatial position as a result of physical processes such as windblown sands, and that allows sunlight to reach the surface of selected sand and sandy loam soil types. The proposed maintenance activities in this part of the Project area would occur outside of critical habitat Unit 9 and removal of nonnative vegetation could improve the quality of the PBF, though negative indirect effects from herbicide application and other activities could occur.

You have proposed the following measures to avoid and minimize adverse effects to the Monterey spineflower and Monterey spineflower critical habitat:

1. A Service-approved biologist will survey for Monterey spineflowers in all areas of suitable habitat within and within 100 feet of proposed work areas before the start of work, including new work areas and areas receiving repeat maintenance in subsequent years. Surveys will be conducted during the May through August blooming period and include locations identified for access, staging, and placement of removed sediment. Surveys for work proposed to occur in suitable habitat from January through April in a given year will be conducted in the previous year during the blooming period, and repeated prior to the start of work.
2. If Monterey spineflowers are detected, all plant locations including an adjacent 50-foot buffer within which no work will occur will be clearly marked. Best management practices will be implemented to prevent the transport of dust, sediment, herbicides, or invasive plant materials into these areas. The Service will be contacted immediately to assess whether additional avoidance measures may be required.
3. A Service-approved biologist or biological monitor trained by the biologist to identify Monterey spineflowers and with the authority to stop work will be present during all work conducted adjacent to identified Monterey spineflower locations and Monterey spineflower critical habitat to ensure impacts to plants and their habitat are avoided.
4. Management activities including the stockpiling or placement of removed sediment will not occur within designated Monterey spineflower critical habitat Unit 9. If vehicle access through Monterey spineflower critical habitat is unavoidable, all travel will be confined to established roads and speed limits will be enforced.

---

<sup>1</sup> The critical habitat rule for the Monterey spineflower uses the term "primary constituent elements" (PCEs) to describe the "physical and biological features" (PBFs) as used in the current definition of "destruction or adverse modification of critical habitat." For this biological opinion, PCEs and PBFs are considered synonymous.

5. The transport or spread of dust, sediment, herbicides, or invasive plant materials into Monterey spineflower critical habitat Unit 9 will be prevented.
6. If impacts to any Monterey spineflowers detected in or adjacent to work areas cannot be avoided, all work which may harm or destroy spineflowers or degrade their habitat will be halted and the Service will be contacted immediately for instructions on how to proceed.
7. Herbicides will not be applied in areas or during weather where they may drift downwind or be carried via runoff to known Monterey spineflower locations or into Monterey spineflower critical habitat Unit 9. No herbicides will be applied within 24 hours of forecasted rain or within 24 hours following a rainfall event of 0.25 inches or greater.
8. A Service-approved biologist will conduct mandatory worker awareness training for all Project personnel before work begins and which includes, at a minimum, the biology, identification, and habitat needs of Monterey spineflowers and the Project conservation measures being taken to protect them.

*Yellow-billed cuckoo*

The yellow-billed cuckoo has not been documented within or adjacent to the Project area, though protocol surveys were not conducted for the BA and cuckoos may be difficult to detect, having large home ranges and calling infrequently (Halterman et al. 2016). The species has declined substantially west of the Rocky Mountains and the nearest known occurrence near the Salinas River is from 1950, over 50 miles from the action area (MCWRA 2016a). The yellow-billed cuckoo typically requires large areas (>50 acres) of continuous patches of riparian habitat with native broadleaf trees and shrubs for nesting, e.g. willow-cottonwood forest. Some riparian habitat within the southern RMUs may be suitable for breeding, cover and foraging. While unlikely to occur in the Project area, maintenance activities could increase the availability and quality of suitable habitat for cuckoos in the long-term by restoring more natural hydrologic processes in the Salinas River.

You have proposed the following measures to avoid and minimize adverse effects to the yellow-billed cuckoo:

1. A Service-approved biologist with demonstrable experience in yellow-billed cuckoo identification, vocalizations, and biology will survey for yellow-billed cuckoos in all areas of suitable habitat in and within 500 feet of work areas before the start of work, including areas receiving repeat maintenance in subsequent years. Surveys will follow Service-approved guidelines (Halterman et al. 2016) except that a minimum of two pre-construction surveys will be required, and the second survey will be conducted no more than 48 hours prior to the start of work. Surveys will be conducted for all work scheduled between April 15 and September 30 and include access, staging, and removed sediment placement areas.
2. If any yellow-billed cuckoos are detected, activities which may harm or disturb cuckoos will stop and the Service will be contacted immediately for instructions on how to proceed. A

Service-approved biologist will remain on site while the nest is active. A 500-foot buffer around each nest or territory detected will be established within which Project activities may not occur, and all portions of the buffer abutting work areas will be marked. Exceptions to this buffer distance will only be allowed with approval from the Service.

3. Invasive species including *Arundo* canes will be prevented from entering watercourses and be disposed of in a manner that will not contribute to further spread of the species.
4. Removal of native vegetation in *Arundo* removal areas will be minimized, and willows greater than 6 inches dbh will be avoided to the extent feasible.
5. A Service-approved biologist will conduct mandatory worker awareness training for all Project personnel before work begins and which includes, at a minimum, the biology, identification, and habitat needs of yellow-billed cuckoos and the project conservation measures being taken to protect them.
6. Nighttime work will not be allowed.
7. Vehicle traffic will be confined to designated roads.
8. All food-related trash items will be disposed of in secure, closed containers and removed at least once per week to reduce the potential to attract nest predators.
9. Herbicides will not be applied in areas or during weather where they may drift downwind or be carried via runoff into native riparian habitat and harm yellow-billed cuckoos.

We concur with your determination that the Salinas River Stream Maintenance Program may affect, but is not likely to adversely affect, the San Joaquin kit fox, California tiger salamander, Monterey spineflower and its critical habitat, and yellow-billed cuckoo. Our concurrence is based on the low likelihood of these species being present in work areas, the limited availability of suitable habitat, and/or implementation of the proposed avoidance and minimization measures. If circumstances arise indicating that the proposed project may result in adverse effects to the San Joaquin kit fox, California tiger salamander, Monterey spineflower and its critical habitat, or yellow-billed cuckoo, Project activities should be suspended and the Service should be contacted immediately to determine whether additional consultation is required.

### **Consultation History**

The Service has participated in telephone calls, site visits, and communicated through electronic mail with the Corps, MCWRA, and representatives of collaborating parties including the National Marine Fisheries Service (NMFS), Central Coast Regional Water Quality Control Board (RWQCB), Resource Conservation District of Monterey County (RCDMC), The Nature Conservancy (TNC), California Department of Fish and Wildlife (CDFW), the U.S. Environmental Protection Agency (EPA), consultants, landowners, and growers regarding the

proposed Project. The Service transmitted letters to MCWRA in 2011 in response to requests for comment on the Project Environmental Impact Report, and provided a concurrence letter in response to the Corps' 2014 request for informal consultation on a prior demonstration project within two of the seven River Management Units (RMUs) in the proposed Project. We can make available a complete record of this consultation at the Ventura Fish and Wildlife Office.

The following dates represent significant milestones in the coordination and consultation process:

- |                    |  |
|--------------------|--|
| May 26, 2011       | The Service transmits a letter to MCWRA in response to a request for comment on the Notice of Preparation of an Environmental Impact Report (EIR) for the Salinas River Channel Maintenance Program recommending the inclusion of updated survey data and conservation measures for least Bell's vireo, California red-legged frog, and arroyo toad. |
| August 15, 2011    | The Service transmits a letter to MCWRA in response to a request for further information on points made in our May 26, 2011 letter.  |
| July 30, 2014      | The Corps requests informal consultation for impacts to California red-legged frog, California tiger salamander, least Bell's vireo, San Joaquin kit fox, and southwestern willow flycatcher from MCWRA's Salinas River Multi-Benefit Demonstration Project proposed for two RMUs.   |
| September 22, 2014 | The Service transmits a letter indicating our concurrence that the Salinas River Multi-Benefit Demonstration Project is not likely to adversely affect listed species in the Chualar and Gonzales RMUs.  |
| October 23, 2015   | The Service participates in a meeting with other agencies and Project partners organized by MCWRA to present details of the proposed program and discuss permitting requirements and biological resource impacts.  |
| December 2, 2015   | The Service attends a day-long site visit organized by MCWRA to view three proposed Project locations along the Salinas River with the Corps, NMFS, RWQCB, CDFW, and other Project participants.   |
| April 4, 2016      | The Corps requests informal consultation for impacts to California red-legged frog, California tiger salamander, least Bell's vireo, San Joaquin kit fox, southwestern willow flycatcher, and yellow-billed cuckoo from MCWRA's Salinas River Stream Maintenance Program.  |
| June 7, 2016       | The Service participates in a conference call with representatives from the Corps, MCWRA, NMFS, CDFW, TNC, Alnus Ecological (consultant), and other parties to discuss the proposed Project. The Service recommends formal consultation for California red-legged frog and   |

- potentially for least Bell's vireo and comments on survey methods.
- June 30, 2016 The Service recommends by voicemail that the Corps consider formal consultation for California red-legged frog and least Bell's vireo for the Project. The Corps acknowledges these recommendations via voicemail.
- July 7, 2016 MCWRA transmits additional Project information to the Service and other parties in response to comments received during June 7, 2016 call.
- July 21, 2016 The Service recommends by telephone that the Corps propose formal consultation for least Bell's vireo and that southwestern willow flycatcher be removed from the consultation. The Service also recommends that tidewater goby and its critical habitat (formal) and Monterey spineflower and its critical habitat (informal) be added to the consultation request. The Corps confirms these changes via electronic mail.
- July 25, 2016 The Service transmits suggested changes and additions to the proposed conservation measures to the Corps via electronic mail.
- August 3, 2016 The Service participates in a meeting in Salinas with MCWRA, RCDMC, Alnus Ecological, and the Conservation Collaborative (consultant) to discuss proposed conservation measures and survey methods.
- August 10, 2016 The Corps and MCWRA agree to proposed changes in conservation measures.

## BIOLOGICAL OPINION

### DESCRIPTION OF THE PROPOSED ACTION

The Corps proposes to issue a permit for a term of 5 years to MCWRA, pursuant to Section 404 of the Clean Water Act, for the second phase of the Salinas River Stream Maintenance Program, a cooperative planning and design process with agencies, stakeholders, landowners, and growers to establish a flood risk reduction approach for the Salinas River in Monterey County, California that is consistent with other management priorities and maintains or enhances native habitat and ecological and hydrological processes. Project goals are to increase channel complexity, slow velocities in the primary low flow channel, and encourage a wider range of riparian habitat conditions (earlier to later successional vegetation) as would have been present historically. The full Project is proposed to extend 10 years, thus MCWRA would apply for a second 5-year permit from the Corps following the term of the present action. Our analysis is for project actions over a 10-year term.

### *Project design*

An initial demonstration phase permitted in 2014 included two River Management Units (RMUs) along 11.5 miles of the Salinas River west of Highway 101 near the towns of Chualar and Gonzales (see Service 2014). The proposed second phase would include these areas plus five additional RMUs, spanning 92 linear miles of the Salinas River mainstem and two linear miles of tributaries in San Lorenzo Creek, Bryant Canyon Channel, and Gonzales Slough (see BA, Table 1 and MCWRA 2016b, Figs 1-11). Hydraulic modeling was used to guide the Project design and indicated that while significant areas of farmland may continue to be inundated during high flow events following Project activities, the targeted clearing of vegetation including sediment removal in some secondary channels would reduce the extent of flooding. Project benefits are expected in all RMUs and would vary by location (MCWRA & RCDMC 2016, Appendix C).

### *Maintenance activities*

The area of direct Project impacts represents a small fraction (4.2%) of the total area of vegetation in the RMUs, and would total approximately 855 acres or less and vary by RMU (BA Tables 3 & 4, MCWRA 2016c). A total of 125 discrete maintenance areas are proposed. Activities would include native vegetation management including mowing and disking, removal and retreatment of nonnative vegetation (giant reed, *Arundo donax* and tamarisk, *Tamarix parviflora*) by cutting, excavation of plant stocks and roots, and use of herbicides, and sand and sediment grading and removal (e.g. channel smoothing) to reduce the risk of flooding in adjacent farm fields and prevent bank erosion.

A series of linear "secondary channels" would be created and maintained adjacent to the existing low-flow channel (locations shown in PSA Appendix C maps, MCWRA & RCDMC 2016), designed to become active during higher flow events (5-year interval or approximately 25,450 cfs) and increase river flood-carrying capacity. Proposed secondary channels are aligned along meander cutoffs, low-lying undeveloped areas, and former river alignments to mimic the natural braiding of the Salinas River historically provided by higher, scouring flows. Most secondary channels would tie-in with the low flow channel at upstream and downstream locations as would be expected in a natural braided river channel. Downstream tie-in points would be positively graded where joining the low flow channel to avoid potential fish stranding. Where possible, pre-construction staking and flagging would be used to avoid large-trees, riparian vegetation, and wetlands when creating secondary channels.

Native vegetation would be removed above ground using a scraper, mower, bulldozer, excavator, truck, or similar equipment, and roots would be disked or left intact depending on site conditions. Non-native vegetation would be removed mechanically by mowing and shredding stems with a masticator and by herbicide treatment with imazapyr or glyphosate. An approved aquatic formulation would be used where water is present, while a standard formulation may be used in dry areas without potential for drift to open water. Motorized spray rigs would be utilized to transport herbicide; spray treatment would be from the rig, by hand-held power sprayers

extended from a feeder take by a hose, or backpack sprayer. *Arundo* removal areas would be re-sprayed in subsequent years to kill resprouts and underground biomass. To minimize localized erosion, native vegetation on the toe of the bank or on river banks that are steeper than 15% would not be removed (except for specified secondary channel tie-in locations).

Channel bed grading and smoothing following vegetation maintenance would establish a downstream gradient within and preferential flow down secondary channels. Limited limbing and removal of cottonwood trees in secondary channels would follow a decision protocol weighing flow conveyance benefits and safety considerations (MCWRA 2016c). No more than 25% of the canopy cover of a tree would be removed in a given year. Due to dense vegetation and channel constraints prohibiting the creation of secondary channels, a modified treatment approach would be used in RMUs 6 and 7 (work areas 6.12 and 7.01, see maps in Appendix C of MCWRA & RCDMC 2016). This would involve vegetation removal in and adjacent to the river thalweg, limbing of trees, and sand bar ripping including in low floodplain benches directly adjacent to the existing low flow channel to decrease channel roughness and restart natural sediment transport processes.

Up to 554,420 cubic yards (cy) of sediment could be removed annually from all Salinas River secondary channels (BA Table 5) and no more than 785,000 cy (i.e. half the 1.57 million cubic yards of average annual sediment load in the mainstem Salinas River) would be allowed in any two consecutive years. No more than 450,000 cy of sediment would be removed from any given 1-mile length of river in the upper reach, and no more than 100,000 cy of sediment would be removed over any 1 mile length of river in the lower reach, over a consecutive 2 year period. Sediment removal areas would be graded to match adjacent grade, and all sediment removed from secondary channels would be placed in demarcated upland areas outside of the active floodplain and above the ordinary high water mark. Sediment would not be removed in or within 10 feet of the low-flow channel or on banks steeper than 15%, and would only occur in areas that are dry (i.e., on a dry channel bottom or sandbar) and more than 9-inches above any standing water (see criteria in MCWRA 2016c).

#### *Timing, work windows, and avoidance of water and sensitive habitats*

Activities would occur annually with reduced activity expected later in the 10-year project period, with most vegetation management occurring in the first five years followed subsequently by spot management. Activities would avoid most sensitive and rare habitat types, focusing on more transient, early successional vegetation and/or areas dominated by *Arundo* or dense stands of willow (*Salix* spp.). Nighttime work would not occur. Work would not occur in water and wetlands or during rain events, dewatering of river reaches would not occur, and precautions would be taken to ensure flows do not activate secondary channels during maintenance activities; if unexpected rains introduce water into secondary channels during construction, work would be halted in these locations. The timing of activities would have limited overlap with the nesting season for listed birds. Most work would occur below the Ordinary High Water Mark (OHM) of the Salinas River and tributaries, though sediment removed from secondary channels would be placed in demarcated areas outside the active floodplain and above the OHM. Most activities

would occur from September 1 to November 15, except mechanized removal of invasive plants treated with herbicide could begin as early as August 15, and herbicide application would occur from June 1 to November 15 while target plants are green. Mitigation plantings could occur year-round but primarily between January 1 and March 31, and would not occur within, or on banks above, standing or flowing water.

*Avoidance measures and compensatory mitigation*

In addition to the design features described above, species-specific avoidance and minimization measures and general Best Management Practices would be incorporated into all Project activities. All activities conducted in areas of suitable habitat potentially occupied by listed species would be preceded by appropriate surveys. Compensatory mitigation for unavoidable impacts to native riparian vegetation would be provided through *Arundo* removal or planting of native trees and shrubs on a per-stem basis using mitigation ratios based on the type of vegetation removed (MCWRA & RCDMC 2016). Plantings would be watered and managed to the point of establishment and creation of larger patches of vegetation would be emphasized to provide better habitat for edge-sensitive riparian birds.

*Effectiveness monitoring, annual reporting, and adaptive management*

Effectiveness monitoring of maintenance areas will include pre- and post-maintenance centerline topographic surveys in 10% of all secondary channels and located in all RMUs. Surveys will extend from the low flow channel of the Salinas River into the upstream tie-in point of the secondary channel, out the downstream tie-in, and back into the low flow channel. Survey data would be used to refine inputs to the hydraulic model to account for major changes in topography. Repeat surveys of maintenance areas following flood flows may also be used to better understand sediment dynamics (scour and deposition) and the effectiveness of secondary channels or selective treatment sites in inducing scour and/or deposition.

A summary Annual RMU Report documenting all maintenance and mitigation actions would be prepared each year by MCWRA and RCDMC and provided to permitting agencies. The report would describe the year's maintenance in the RMU by activity and acreage (vegetation management and sediment grading or movement), photos of typical work areas before and after maintenance, and an evaluation of adaptive management needs for the following year's maintenance in the RMU if significant flows (5-year flow or greater) occur. For mitigation actions, the Annual RMU Report would include documentation of replacement planting including number of plants, species, GPS location, and photo documentation. *Arundo* removal for mitigation would be provided and documented via GPS location and maps.

If the primary low-flow channel is realigned during a high-flow event, one or more secondary channels or selective treatment areas proposed for maintenance may require minor modifications in location, length, or other characteristics to avoid impacts to the new low flow channel. The design and survey protocols developed for the currently proposed secondary channels would be used for any realignments, and proposed modifications would be distributed to permitting

agencies for consideration and comment by May 15 of that year. Activities within newly-defined secondary channels would include vegetation clearing and *Arundo* removal. Sand and sediment management in new channel locations would require full vetting by permitting agencies. Neither the existing or new low flow channels would be cleared or managed except in RMUs 6 and 7 where such work is necessary.

### **Conservation measures**

To reduce impacts to listed species, the Corps and MCWRA propose to implement the following measures, which include measures originally proposed by the Corps and MCWRA and additional measures recommended by the Service. Additional best management practices (BMPs) to be implemented are described in the biological assessment (MCWRA 2016a):

1. The limits of access and staging areas, locations designated for placement of removed sediment, and work areas adjacent to sensitive habitats to be avoided will be clearly marked.
2. Work will not occur in water or wetlands, including the low flow or active river channel and secondary channels activated by unexpected rain events. Dewatering of river reaches will not occur.
3. No work will be performed if a rain event of 0.25 inches or greater in a 24-hour period occurs. Work may resume after precipitation ceases, a drying-out period of 24 hours is observed, and a Service-approved biologist inspects all work areas to verify absence of listed species.
4. Existing access ramps and roads will be utilized to the fullest extent feasible to access stream areas.
5. Vehicles will observe a daytime speed limit of 20 mph on all roads in the project area except county roads and State and Federal highways.
6. Soil disturbance will not exceed the minimum extent necessary in maintenance areas.
7. Only herbicides approved for use in aquatic and wetland environments (glyphosate or imazapyr) will be used for non-native vegetation removal. Mixing of herbicides will occur in areas adjacent to existing roads with compacted disturbed soils lacking native vegetation.
8. Herbicides will not be used in areas where listed species have been identified by a Service-approved biologist, and will be utilized in such a manner as to prevent poisoning of listed species or their habitat. Herbicide use may only occur after the biologist has relocated the species out of harm's way or has confirmed the species to no longer be at risk from direct or indirect impacts.
9. No herbicides will be applied within 24 hours of forecasted rain or within 24 hours following

- a rainfall event of 0.25 inches or greater. Best management practices will be followed to prevent unintended transport of herbicides by air or water into native habitats.
10. Invasive species including *Arundo* canes will be prevented from entering watercourses and be disposed of in a manner that will not contribute to further spread of the species.
  11. Removal of native vegetation in *Arundo* removal areas will be minimized, and willows greater than 6 inches dbh will be avoided to the extent feasible.
  12. If impacts to listed species are unavoidable, maintenance activities will be redesigned to avoid direct and indirect impacts to listed species.
  13. To minimize local erosion from vegetation and sediment removal, native vegetation on the toe of the bank or on river banks that are steeper than 15% will not be removed, and 5- to 10-foot wide vegetated buffers will be established around maintenance locations and clearly marked.
  14. Run-off of sediments into surface waters from soil stockpiled within or adjacent to channels will be prevented.
  15. Nighttime work will not be allowed.
  16. All food-related trash items will be disposed of in secure, closed containers and removed at least once per week to reduce the potential to attract predators of listed species. After construction, all trash and construction debris will be removed from work areas.
  17. No fueling, repair, maintenance, or washing of vehicles or equipment will occur in waterways, the adjacent floodplain, or top-of-bank areas that may flow into a creek channel. A hazardous materials spill prevention and response plan will be in place before work begins.
  18. A Service-approved biologist will be on-site or on-call to visit maintenance areas at any time during work in the event a special-status species is encountered. A biological monitor trained by the approved biologist will be the contact for any employee or contractor who inadvertently kills or injures a listed species or who finds a dead, injured, or entrapped individual if the approved biologist is not present. The biologist or biological monitor will report the incident to the Service via electronic mail and telephone within one working day.
  19. A Service-approved biologist will provide mandatory worker awareness training for all project personnel before work begins and which includes, at a minimum, the biology, identification, and habitat needs of the least Bell's vireo, tidewater goby, and California red-legged frog and the project conservation measures being taken to protect them.
  20. A Service-approved biologist with demonstrable experience in least Bell's vireo identification, vocalizations, and biology will survey for vireos in all areas of suitable habitat

34. All walled open trenches and other excavations 6 inches deep or greater in areas of suitable habitat will be covered each night or provided with soil escape ramps to prevent entrapment of California red-legged frogs. A Service-approved biologist or biological monitor trained by the biologist to identify California red-legged frogs will inspect excavations prior to work in or around these features and before they are backfilled.
35. For work conducted within or adjacent to aquatic, riparian, and upland habitats suitable for California red-legged frogs, exclusion fencing will be placed around larger excavations which cannot be covered or provided escape ramps to prevent entrapping frogs. Exclusion fencing will be placed around work areas adjacent to suitable habitat to discourage California red-legged frogs from entering work areas.
36. Soil stockpile areas will be covered at night or surrounded by exclusion fencing to discourage habitation by animals, and inspected in the morning for California red-legged frogs prior to disturbance.

## **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 conditions of the least Bell's vireo, tidewater goby, and California red-legged frog, the factors responsible for that condition, and the species' survival and recovery needs; (2) the Environmental Baseline, which analyzes the condition of the least Bell's vireo, tidewater goby, 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 these species; (3) the Effects of the Action, which identifies the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the least Bell's vireo, tidewater goby, 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 least Bell's vireo, tidewater goby, 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 least Bell's vireo,

tidewater goby, 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 least Bell's vireo, tidewater goby, and California red-legged frog in the wild by reducing the reproduction, numbers, and distribution of each 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. A final rule revising the definition of "destruction or adverse modification of critical habitat" was published on February 11, 2016 (81 FR 7214). 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 revised "destruction or adverse modification" definition focuses on how Federal actions affect the quantity and quality of the physical or biological features (PBFs)<sup>2</sup> in the designated critical habitat for a listed species and, especially in the case of unoccupied habitat, on any impacts to the critical habitat itself. Specifically, the Service will generally conclude that a Federal action is likely to "destroy or adversely modify" designated critical habitat if the action results in an alteration of the quantity or quality of the essential physical or biological features of designated critical habitat, or that precludes or significantly delays the capacity of that habitat to develop those features over time, and if the effect of the alteration is to appreciably diminish the value of critical habitat for the conservation of the species.

The Service may consider other kinds of impacts to designated critical habitat. For example, some areas that are currently in a degraded condition may have been designated as critical habitat for their potential to develop or improve and eventually provide the needed ecological functions to support species' recovery. Under these circumstances, the Service generally concludes that an action is likely to "destroy or adversely modify" the designated critical habitat if the action alters it to prevent it from improving over time relative to its pre-action condition. The "destruction or adverse modification" definition applies to all physical or biological features; as described in the proposed revision to the current definition of "physical or biological features" (50 CFR 424.12), "[f]eatures may include habitat characteristics that support ephemeral or dynamic habitat conditions" (79 FR 27066).

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, in terms of physical or biological features (PBFs), the factors responsible

---

<sup>2</sup> The critical habitat rule for the tidewater goby uses the term "primary constituent elements" (PCEs) to describe the "physical and biological features" (PBFs) as used in the revised definition of "destruction or adverse modification of critical habitat." For this biological opinion, PCEs and PBFs are considered synonymous.

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 PBFs and how that will influence the recovery role of the affected critical habitat unit; 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 PBFs and how that will influence the recovery role of affected critical habitat unit.

For purposes of the adverse modification determination, the effects of the proposed Federal action on the critical habitat of the tidewater goby 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.

## STATUS OF THE SPECIES

### Least Bell's Vireo

The Service listed the least Bell's vireo as endangered in 1986 (Service 1986), and critical habitat was designated in 1994 (Service 1994) with no areas in or near the action area. Although a final recovery plan has not been published, a draft recovery plan was completed in 1998 (Service 1998b). The Service issued a 5-year review in 2006 (Service 2006) in which we recommended downlisting to threatened status because of a 10-fold increase in population size since listing, expansion of locations with breeding pairs throughout southern California, and conservation and management of suitable breeding habitat throughout its range. 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 (1998b).

The least Bell's vireo is a small, migratory songbird that nests and forages almost exclusively in riparian woodland. It is one of four recognized subspecies (AOU 1998), and each is isolated from another throughout the year (Hamilton 1962, Service 1998b). Least Bell's vireos are site-tenacious across breeding seasons and highly territorial. They typically inhabit structurally diverse woodlands along watercourses that feature dense cover within 0.9 to 1.8 m (3 to 6 ft) of the ground and a dense, stratified canopy (Goldwasser 1981, Salata 1983, Gray and Greaves 1984, Service 1998b). The understory of the 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 (*Salix*) species, and several perennial species (Service 1998b). Important canopy species include mature arroyo willow (*Salix lasiolepis*) and black willow (*Salix gooddingii*), and occasional cottonwood (*Populus* spp.), western sycamore (*Platanus racemosa*), and coast live oak (*Quercus agrifolia*).

Least Bell's vireos feed primarily on insects, especially lepidopteran larvae within willow stands or associated riparian vegetation (Miner 1989, Brown 1993). The feeding behavior consists largely of gleaning prey from leaves or woody surfaces while perched or hovering, and less frequently by aerial pursuit (Salata 1983, Miner 1989). Least Bell's vireos concentrate most of their foraging between 0 to 6 m (20 ft) above ground level (Salata 1983, Miner 1989).

Least Bell's vireos generally arrive in breeding areas in southern California from mid-March to early April, with males arriving before females and older birds arriving before first-year breeders (Service 1998b). 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 1998b). Males establish and defend breeding territories by singing and chasing intruders (Barlow 1962, Beck 1996, Service 1998b). Although territories typically range in size from 0.2 to 3.0 ha (0.5 to 7.5 ac; Service 1998b), no relationship appears to exist between size and quality of the territory (Newman 1992).

Nest building commences a few days after pair formation, with the female selecting a nest site and both sexes constructing the nest (Pitelka and Koestner 1942, Barlow 1962, Service 1998b). Nests are typically suspended in forked branches within 0.9 m (3 ft) above the ground and with no preference for any particular plant species as the nest host (Nolan 1960, Barlow 1962, Gray and Greaves 1984, Service 1998b). Typically 3 or 4 eggs are laid on successive days shortly after nest construction (Service 1998b). The eggs are incubated by both parents for approximately 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 (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 breeding season (Service 1998b).

Multiple long-term monitoring studies indicate that approximately 59 percent of nests successfully produce fledglings, with an average of 1.8 chicks fledging per nest (Service 1998b). Although nests appear to be more accessible to terrestrial predators because of their relatively low placement (Franzreb 1989), western scrub-jays (*Aphelocoma californica*) account for the majority of documented depredation (Peterson 2002, Peterson et al. 2004). Predation rates can exceed 60 percent of the total nests in the 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 brown-headed cowbirds (*Molothrus ater*) is another major source of failure for nests of least Bell's vireos (Franzreb 1989; Service 1998b; Kus 1999, 2002; Griffith and Griffith 2000; Sharp 2002). The nests that are parasitized are either abandoned or fledge cowbird chicks rather than least Bell's vireos. It is believed that cowbirds did not historically occur within the range of the least Bell's vireo, which may explain why least Bell's vireos have not evolved adequate defenses to avoid loss of productivity due to parasitism (Franzreb 1989, Kus 2002). Cowbird trapping and focused nest monitoring can substantially reduce parasitism

and its effects (Franzreb 1989, Service 1998b, 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. It is 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 approximately 11 m (35 ft) the first day to approximately 61 m (200 ft) several weeks after fledging (Hensley 1950, Nolan 1960). This distance has been shown to increase to at least 1.6 km (1 mi) prior to their first fall migration (Gray and Greaves 1984). Banding records indicate that while most first-year breeding individuals return to their natal drainage after winter migration, some disperse considerable distances to other breeding locations (Greaves and Labinger 1997, Service 1998b, 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 sighted as breeding adults in Ventura County, and the opposite movement from Ventura to San Diego has been observed also (Greaves and Labinger 1997). The maximum, documented dispersal distance is approximately 209 km (130 mi; Service 1998b). Although movement between sites by older birds may occur, site fidelity by least Bell's vireos after the first breeding season is generally high. Most dispersal occurs prior to the first breeding season (Service 1998b).

The least Bell's vireo historically occurred from Tehama County in northern California to northwestern Baja California, Mexico, and eastward to Owens Valley, Death Valley and the Mojave River (Grinnell and Miller 1944, Service 1998b). Although previously considered to be abundant locally, regional declines were observed by the 1940's (Grinnell and Miller 1944), and it was believed to be extirpated from California's Central Valley by the early 1980's (Franzreb 1989). Except for a few outlying pairs, by 2002 the least Bell's vireo was mostly restricted to southern California south of the Tehachapi Mountains and northwestern Baja California (Wilbur 1980, Garrett and Dunn 1981, Franzreb 1989, 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 historic population; Service 1986), 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 listing 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 listing, and it is unlikely that breeding has occurred within recent years in the Sacramento Valley (Service 2006).

At the time of listing (Service 1986), 99 percent of the remaining least Bell's vireos were in southern California (Santa Barbara County and southward), with 77 percent in San Diego County. Ninety-nine percent still remain in southern California (Service 2006), although 54 percent are in San Diego County and 30 percent in Riverside County. Thus, despite a significant increase in overall numbers, the species remains mostly restricted to the southern portion of its historic range (Service 2006).

Causes for decline include destruction or degradation of habitat, river channelization, water diversions, lowered water tables, spread of invasive nonnative plants (e.g. *Arundo donax*), gravel mining, agricultural development, and cowbird parasitism (Service 1986, 1994, 1998b). Habitat losses have fragmented most remaining populations into small, disjunct, widely dispersed subpopulations (Franzreb 1989). Habitat fragmentation negatively affects abundance and distribution of neotropical migratory songbirds 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 with much degraded habitat have lower productivity (e.g., hatching success) than those in areas with high quality habitat (Pike and Hays 1992).

Since listing, the least Bell's vireo population in California has increased 10-fold as indicated by the number of known territories (from 291 to 2,968 known territories; Service 2006). The population has grown during each 5-year period since 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 substantial increases in Orange County, Ventura County, San Bernardino County and Los Angeles County. The population in Santa Barbara County has declined since listing in 1986. Kern, San Luis Obispo, Monterey, San Benito and Stanislaus Counties have each had a few isolated individuals and/or breeding pairs since listing, but these counties have not supported sustained populations.

### *Recovery Objectives*

The 1998 draft recovery plan for the least Bell's vireo (Service 1998b) 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 range-wide surveys, and research activities necessary to monitor and guide the recovery effort.

#### *5-Year Status Review*

The Service completed a five-year status review for the least Bell's vireo in September 2006 (Service 2006). The 5-year review reported a 10-fold increase in the least Bell's vireo population since listing. Substantial increases occurred in San Diego County, Riverside County, Orange County, Ventura County, San Bernardino County, and Los Angeles County, while Santa Barbara County appears to have experienced a decline. The 5-year review reiterates that nest parasitism by the brown-headed cowbird is the most important threat to the least Bell's vireo. While acknowledging that the least Bell's vireo has not met the downlisting criteria from the draft recovery plan, the 5-year review determined that the sub-species is no longer in danger of extinction throughout all or a significant portion of its range, and recommended that the Service downlist the least Bell's vireo to threatened status.

#### **Tidewater goby**

The Service listed the tidewater goby as endangered on March 7, 1994 (59 Federal Register (FR) 5494). On June 24, 1999, we 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) and the 5-Year Review for the tidewater goby was completed in September 2007 (Service 2007). We revised critical habitat in 2013 (78 FR 8746, Service 2013) and a proposed rule to down list the tidewater goby was published in the Federal Register on March 13, 2014 (79 FR 14339).

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). We based much of the information in this status section on 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. Tidewater gobies tend to be found in the upstream portions of lagoons. They can withstand a range of habitat conditions and have been documented in waters with salinity levels that range from 0 to 60 ppt, temperatures from 46 to 77 degrees Fahrenheit, and depths from approximately 10 inches to 6.5 feet.

Tidewater gobies feed on small invertebrates, including mysids, amphipods, ostracods, snails, aquatic insect larvae, and particularly chironomid larvae; however, 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.

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 and males remain in the burrows to guard the eggs. Male tidewater gobies 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 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.

Historically, the tidewater goby occurred in at least 135 California coastal lagoons and estuaries, from Tillas Slough near the Oregon/California 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. Some of these locations presumed to be occupied have not been surveyed in over 10 years. Currently, the most stable populations are in lagoons and estuaries of intermediate size (5 to 124 acres) that are relatively unaffected by human activities. 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.

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.

Native predators are not known to be important regulators of tidewater goby population size in the lagoons of southern California. Rather, population declines are attributed to environmental conditions. During high flows, lagoon barriers are breached; exposing tidewater gobies to strong tidal conditions. As a result, tidewater goby populations generally plummet. Populations typically recover quickly in summer, with recorded mean densities of 54 to 323 fish per square foot. Tidewater goby densities are greatest among emergent and submerged vegetation (Moyle 2002).

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, lagoons, and estuaries. Some extirpations are believed to be related to pollution, upstream water diversions, and the introduction of non-native predatory fish species [most notably, centrarchid sunfish (*Lepomis* spp.) and bass (*Micropterus* spp.)]. These threats continue to affect some of the remaining populations of tidewater gobies.

#### *Recovery Objectives*

The goal of the tidewater goby recovery plan (Service 2005) is to conserve and recover the tidewater goby throughout its range by managing threats and maintaining viable metapopulations within each recovery unit while retaining 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 six recovery units: North Coast Unit, Greater Bay Unit, Central Coast Unit, Conception Unit, Los Angeles/Ventura Unit, and South Coast Unit.

The recovery plan specifies that the tidewater goby may be considered for down listing when:

1. Specific threats to each metapopulation (e.g., coastal development, upstream diversion, channelization of rivers and streams) 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 down listing 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 the down listing 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.

#### *5-Year Status Review*

The 5-year review for the tidewater goby (Service 2007) stated that the recovery plan reflects up-to-date information; however, the 5-year review reconsidered the down listing and delisting criteria that had been included in the recovery plan (Service 2005). The 5-year review stated that other, currently available information on the species may also be used to determine the appropriate listing status of the species under the Act. These include the current number of occupied localities, current laws and regulations that act to protect the species, and our current understanding of threats and their impact on the tidewater goby. The 5-year review recommended that we reclassify the tidewater goby from endangered to threatened because we concluded that the species was not in imminent danger of extinction. The main reason for this recommendation was that the number of localities known to be occupied had more than doubled since listing.

The 5-year review also concluded that the tidewater goby may be more resilient in the face of severe drought events than believed at the time of listing. The 5-year review also stated that threats identified at the time of listing had been reduced or were not as serious as thought at that time. Although numerous threats to the tidewater goby have been identified (e.g., non-native predation and competition, pollution, cattle grazing), information on the degree of impact of these threats is generally lacking. According to the 5-year review, the increase in occupied localities indicated that the threats appeared not to be having a major impact on the tidewater goby.

On May 18, 2010, we received a petition from The Pacific Legal Foundation, requesting that the tidewater goby be reclassified as threatened under the Act. Included in the petition was reference to the 5-year review. We published a 90-day finding on January 19, 2011 (76 FR 3069), stating our conclusion that the petition presented substantial scientific or commercial information indicating that the petitioned action (reclassification of the tidewater goby) may be warranted. We published a proposed rule to down list the tidewater goby on March 13, 2014 (79 FR 14339). A final rule has not been published so the tidewater goby remains listed as endangered.

#### **Tidewater goby critical habitat**

We originally designated critical habitat for the tidewater goby on November 20, 2000 (65 FR 69693). In January 2008, we finalized a revised designation of critical habitat (73 FR 5920). On October 19, 2011, another revision to critical habitat was proposed (76 FR 64996), and on February 6, 2013, a final rule designating revised critical habitat for the tidewater goby was published (78 FR 8745).

Under the Act and its implementing regulations, we are required to identify the physical and biological features essential to the conservation of the 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 physical and biological features that, when present 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 element specific to the tidewater goby include:

Persistent, shallow (in the range of approximately 0.3 to 6.6 feet), still-to-slow-moving water in lagoons, estuaries, and coastal streams with salinity up to 12 ppt, which provide adequate space for normal behavior and individual and population growth that contain one or more of the following:

- Substrates (e.g., sand, silt, mud) suitable for the construction of burrows for reproduction;
- Submerged and emergent aquatic vegetation, such as *Potamogeton pectinatus*, *Ruppia maritima*, *Typha latifolia*, 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 12,156 acres fall within the boundaries of the 2013 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, Los Angeles, Orange, and San Diego Counties and includes 65 separate units. Approximately the last 2.5 river miles of the proposed Project, located in RMU 7, fall within critical habitat Unit MN-2 (Salinas River unit). Unit MN-2 also includes the Salinas River lagoon located immediately adjacent to and downstream of the action area and encompasses approximately 466 acres, representing approximately 3.8 percent of the total area of critical habitat designated throughout the range of the tidewater goby. Critical habitat Unit MN-2 is described in greater detail in the Environmental Baseline section of this document.

### **California Red-legged Frog**

The California red-legged frog was federally listed as threatened on May 23, 1996 (61 Federal Register (FR) 25813, Service 1996). Revised critical habitat for the California red-legged frog was designated on March 17, 2010 (75 FR 12816, Service 2010). The Service issued a recovery plan for the species (Service 2002). A detailed description of California red-legged frogs can be found in Storer (1925), Stebbins (2003), and Jennings and Hayes (1994).

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 (Storer 1925, Jennings and Hayes 1985, Shaffer et al. 2004). The California red-legged frog has sustained a 70 percent reduction in its geographic range as a result of several factors acting singly or in combination (Davidson et al. 2001).

The California red-legged frog uses a variety of habitat types, including various aquatic systems, riparian, and upland habitats. California red-legged frogs have been found at elevations that range from sea level to about 5,000 feet. California red-legged frogs use the environment in a variety of ways, and in many cases they may complete their entire life cycle in a particular area without using other components (i.e., a pond is suitable for each life stage and use of upland habitat or a riparian corridor is not necessary). Populations appear to persist where a mosaic of habitat elements exists, embedded within a matrix of dispersal habitat. Adults are often associated with dense, shrubby riparian or emergent vegetation and areas with deep (greater than 28 inches) still or slow-moving water; the largest summer densities of California red-legged frogs are associated with deep-water pools with dense stands of overhanging willows (*Salix* spp.) and an intermixed fringe of cattails (*Typha latifolia*) (Jennings 1988). California red-legged frogs spend considerable time resting and feeding within dense riparian vegetation; it is believed the moisture and camouflage provided by the riparian plant community provide good foraging habitat and riparian vegetation provides cover during dispersal (Rathbun et al. 1993).

Breeding sites of the California red-legged frog are in aquatic habitats; larvae, juveniles, and adult frogs have been collected from streams, creeks, ponds, marshes, deep pools and backwaters within streams and creeks, dune ponds, lagoons, and estuaries. California red-legged frogs frequently breed in artificial impoundments such as stock ponds, given the proper management of hydro-period, pond structure, vegetative cover, and control of exotic predators. While frogs successfully breed in streams and riparian systems, high spring flows and cold temperatures in streams often make these sites risky egg and tadpole environments. An important factor influencing the suitability of aquatic breeding sites is the general lack of introduced aquatic predators. 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.

During periods of wet weather, starting with the first rains of fall, some individual California red-legged frogs may make long-distance overland excursions through upland habitats to reach breeding sites. In Santa Cruz County, Bulger et al. (2003) found marked California red-legged frogs moving up to 1.7 miles through upland habitats, via point-to-point, straight-line migrations without apparent regard to topography, rather than following riparian corridors. Most of these overland movements occurred at night and took up to 2 months. Similarly, in San Luis Obispo County, Rathbun and Schneider (2001) documented the movement of a male California red-legged frog between two ponds that were 1.78 miles apart; this was accomplished in less than 32 days. However, most California red-legged frogs in the Bulger et al. (2003) study were non-migrating frogs and always remained within 426 feet of their aquatic site of residence (half of the

frogs always stayed within 82 feet of water). Rathbun et al. (1993) radio tracked several California red-legged frogs near the coast in San Luis Obispo County at various times between July and January; these frogs also stayed rather close to water and never strayed more than 85 feet into upland vegetation. Nine California red-legged frogs radio-tracked from January to June 2001, in East Las Virgenes Creek in Ventura County remained relatively sedentary as well; the longest within-channel movement was 280 feet and the furthest movement away from the stream was 30 feet (Scott 2002). Hayes and Tennant (1985) found juveniles to be active diurnally and nocturnally, whereas adults were largely nocturnal.

After breeding, California red-legged frogs often disperse from their breeding habitat to forage and seek suitable dry-season habitat. Cover within dry-season aquatic habitat could include boulders; downed trees; logs; agricultural features such as drains, watering troughs, spring boxes, abandoned sheds, or hay-ricks; and industrial debris. California red-legged frogs use small mammal burrows and moist leaf litter (Rathbun et al. 1993, Jennings and Hayes 1994); incised stream channels with portions narrower and deeper than 18 inches may also provide habitat (61 FR 25813). This type of dispersal and habitat use, however, is not observed in all California red-legged frogs and is most likely dependent on the year-to-year variations in climate and habitat suitability and varying requisites per life stage. For the California red-legged frog, this habitat is potentially all aquatic and riparian areas within the range of the species and includes any landscape features that provide cover and moisture (61 FR 25813).

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.

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*), red swamp crayfish (*Procambarus clarkii*), and signal crayfish (*Pacifastacus leniusculus*). Chytrid fungus (*Batrachochytrium dendrobatidis*) is a waterborne

fungus that can decimate amphibian populations, and is considered a threat to California red-legged frog populations.

*Recovery Objectives*

The 2002 final recovery plan for the California red-legged frog (Service 2002) states that the goal of recovery efforts is to reduce threats and improve the population status of the California red-legged frog sufficiently to warrant delisting. The recovery plan describes a strategy for delisting, which includes (1) protecting known populations and reestablishing historical populations; (2) protecting suitable habitat, corridors, and core areas; (3) developing and implementing management plans for preserved habitat, occupied watersheds, and core areas; (4) developing land use guidelines; (5) gathering biological and ecological data necessary for conservation of the species; (6) monitoring existing populations and conducting surveys for new populations; and (7) establishing an outreach program. This species will be considered for delisting when:

1. Suitable habitats within all core areas are protected and/or managed for California red-legged frogs in perpetuity, and the ecological integrity of these areas is not threatened by adverse anthropogenic habitat modification (including indirect effects of upstream/downstream land uses);
2. Existing populations throughout the range are stable (i.e., reproductive rates allow for long-term viability without human intervention). Population status will be documented through establishment and implementation of a scientifically acceptable population monitoring program for at least a 15-year period, which is approximately 4 to 5 generations of the California red-legged frog. This 15-year period will preferably include an average precipitation cycle;
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 (i.e., when populations are stable or increasing at each core area);
4. The species is successfully reestablished in portions of its historic range such that at least one reestablished population is stable/increasing at each core area where California red-legged frog 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.

The recovery plan identifies eight recovery units, which are based on the assumption 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 long-term viability within 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.

## ENVIRONMENTAL BASELINE

### Action Area

The implementing regulations for section 7(a)(2) of the Act define the “action area” as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 Code of Federal Regulations 402.02). The action area for this biological opinion includes River Management Units 1 through 7 of the Salinas River within their designated boundaries (see maps, MCWRA 2016b), encompassing river miles 2.0 through 94.0 of the Salinas River and including portions of Gonzales Slough, Bryant Canyon Channel, and San Lorenzo Creek. To address potential effects to tidewater goby and tidewater goby critical habitat, the Salinas River downstream of RMU 7 (i.e. northwest of the Highway 1 bridge) and the Salinas River Lagoon were added. This defines a larger action area than was described in the Corps’ original request (Corps 2016).

### Habitat Characteristics of the Action Area

A range of habitat types are found in the action area, and their distribution and quality vary both spatially and annually with changes in precipitation, river hydrology, and water management. Vegetation in the Salinas River channel and floodplain (2-mile buffer) includes aquatic, low-flow channel or unvegetated, low stature herbaceous wetland, *Arundo*-dominated, sparse herbaceous, early successional perennial riparian, mid-successional willow, and early to mid-successional cottonwood forest (Table 2, BA; see also FEIR Table 3.5-1). Adjacent upland areas of the RMUs also include non-native ruderal grassland, coastal scrub, oak and pine woodland, isolated dune vegetation, actively farmed agricultural fields, grazing lands, developed and disturbed ground, and paved and unpaved roadway. Presence and distribution of vegetation communities vary across RMUs. RMU 1 includes a higher diversity of vegetation than other RMUs, including riparian forest (e.g. sycamore cottonwood groves) as well as emergent wetlands and sparsely vegetated sandbars. By contrast, the channel in RMU 5 is dominated by sparse herbaceous and early successional riparian vegetation and small, isolated stands of young cottonwoods, with *Arundo* prominent on many levee faces. (details in BA, “Program Area Overview”).

### Existing Conditions in the Action Area

RMUs in the action area primarily include privately owned farm properties which are adjacent to, enter, or cross the active river channel. The Salinas River in the action area is characteristic of a depositional environment where transverse, lateral, and point bars form the predominant channel pattern. The river represents a weakly braided channel system upstream of river mile (RM) 23.0 characterized by occasional midchannel bars. Braiding is less evident downstream of RM 23.0, possibly due to the more extensive levee system in lower reaches. Levees confine the formerly expansive floodplain, reducing the availability of deposition sites and formation of extensive sand bars. Below RM 23.0 the low-flow channel is narrower and appears less sinuous than upstream. The location and duration of surface water within each RMU varies annually (details by RMU in "Program Area Overview" in BA).

Non-native invasive plant species are pervasive in the Salinas River watershed, which has the second largest infestation of *Arundo donax* in the State of California (Cal-IPC 2011, referenced in BA), and the extent of *Arundo* varies across the RMUs (Table 2, BA). Other invasive species include tamarisk, *Cortaderia* spp. (pampas and jubata grass), and *Phoenix canariensis* (Canary Island date palm). Recent field observations suggest that drought conditions may be facilitating the spread of tamarisk in RMU 1.

### Previous Consultations in the Action Area

On August 13, 1992, the Service issued a biological opinion (1-6-92-F-44) to the Corps on your permitting of the Monterey County Flood Control and Water Conservation District's (later renamed MCWRA) breaching of the Salinas River Lagoon. That biological opinion addressed the effects of breaching operations on the federally endangered Smith's blue butterfly (*Euphilotes enoptes smithi*) and brown pelican (*Pelecanus occidentalis*). That biological opinion was issued before the California red-legged frog was listed under the Act, and we determined that the proposed project was not likely to jeopardize the continued existence of either species.

We consulted formally with the Corps in 2007 on your issuance of permits to MCWRA for construction of a surface water diversion structure in the Salinas River and for mechanical breaching of the Salinas River Lagoon. We determined in our biological opinion (1-8-06-F-54) issued on July 24, 2007 that the proposed project was not likely to jeopardize the continued existence of the brown pelican, California red-legged frog, or federally threatened western snowy plover (*Charadrius alexandrinus nivosus*).

We consulted informally with the Corps in 2014 on your issuance of a permit to MCWRA for the Salinas River Multi-Benefit Demonstration Project, a smaller-scale pilot version of the proposed Project in RMUs 4 and 5, and issued our concurrence (2014-I-0416) that the proposed project was not likely to adversely affect the California red-legged frog, California tiger salamander, least Bell's vireo, San Joaquin kit fox, or southwestern willow flycatcher on September 22, 2014. The Salinas River Multi-Benefit Demonstration Project has been implemented in RMUs 4 and 5 for the past two years with no reported impacts to listed species

(MCWRA 2016a).

#### Status of the Species in the Action Area

Information used to develop this section includes CNDDDB occurrence data, observations made during reconnaissance-level surveys of the action area in winter 2014 (RMUs 4 and 5 only) and spring and summer 2015, reports submitted to the Service, published literature, and information provided by regional species experts and resource agencies. Protocol surveys for listed species were not conducted for the proposed Project. A description of the methods utilized for the reconnaissance-level surveys can be found in the biological assessment (MCWRA 2016a) and final environmental impact report (MCWRA 2014a). The Salinas River Multi-Benefit Demonstration Project has been implemented in RMUs 4 and 5 for the past two years, with no reported impacts to listed species to date (MCWRA 2016a).

#### **Least Bell's vireo**

RMUs 1-5 and the majority of RMU 6 are within the historic range of the least Bell's vireo (Service 1998b). Critical habitat for the least Bell's vireo is not found within the action area. The species was considered extirpated from Monterey County by around 1960. Surveys conducted along the Salinas River between the Highway 1 Bridge and Bradley between 1996 and 2001 for an Army Corps Regional General Permit found no least Bell's vireos (MCWRA 2016a). However, a singing male was observed in 1993 near Bradley (Service 1998b) and a non-territorial male was observed in 2012 near San Miguel in northernmost San Luis Obispo County, just over the county line and approximately 20 miles upstream of the action area (HTH 2013). A stable breeding population is not currently known to exist along the Salinas River, but systematic surveys have not been conducted within the action area in 15 years and individuals may breed in localized areas. Recent observations suggest least Bell's vireos are using and may be recolonizing upstream reaches in adjacent San Luis Obispo County. In 2005 a male and breeding pair were observed near Paso Robles but nesting was never confirmed (SBC 2007, CNDDDB 2016), and in 2005 and 2009 a territorial male was observed near Wellsona Road north of Paso Robles. Protocol-level surveys conducted in 2012 near Wellsona Road detected no least Bell's vireos (Service 2012). Least Bell's vireos were also recorded breeding successfully outside of the Salinas River watershed in 2001 near San Juan Bautista, approximately 13 linear miles northeast of RMU 7 (CNDDDB 2016).

Agriculture and development immediately adjacent to the Salinas River are recognized disturbances, but areas of suitable early and mid-successional riparian habitat with the dense understory preferred by breeding vireos occur in scattered patches throughout the action area. The highest quality habitat is concentrated in RMUs 1 and 2, particularly from river miles 70 to 94 where habitat structure is more suitable and reaches are free of *Arundo* infestation (Service 1998b, MCWRA 2014a, 2016a). However, it is worth noting that least Bell's vireos have occasionally been observed in southern California nesting in dense *Arundo* patches and in a variety of habitat types adjacent to riparian habitats (Labinger and Greaves 2001, Pike et al. 2004). There is also potential for least Bell's vireos to breed in the proposed maintenance areas

within Bryant Canyon Channel and San Lorenzo Creek. Least Bell's vireo numbers have increased 10-fold overall since their listing as endangered in 1996, and the species is recolonizing previously occupied areas and occurring in locations where it was previously undocumented (Service 2006, Howell et al. 2010). Thus, while the current probability of least Bell's vireos occurring in the action area is believed to be low, the species could occur and potentially breed within the action area during the proposed 10-year duration of the Project, and the proposed action could increase the likelihood of occurrence over the life of the Project.

### *Recovery*

The action area encompasses 92 miles of the Salinas River, one of three historically occupied sites identified as recovery targets in Criterion 2 of the draft recovery plan for the least Bell's vireo (Service 1998b). Recovery Criterion 2 is one of two delisting criteria, and defines the goal of achieving stable or increasing populations/ metapopulations of the least Bell's vireo, consisting of several hundred or more breeding pairs, along the Salinas River, Sacramento Valley, and San Joaquin Valley. The draft recovery plan emphasizes the conservation and management of riparian habitat within the historical range of the least Bell's vireo, including the reduction of threats from cowbird parasitism and invasion by exotic plants. The action area provides areas of suitable breeding habitat for least Bell's vireos, particularly in RMUs 1 and 2. Nesting by least Bell's vireos has not been confirmed along the Salinas River since 1983. However, individuals have been observed sporadically in locations upstream of the action area in Monterey and San Luis Obispo Counties since the species' listing in 1986 and as recently as 2012, suggesting the species may be recolonizing areas of its historic range. If least Bell's vireos were observed using the action area in the future, especially for breeding, this would be significant and represent further evidence of the species' overall recovery. The proposed maintenance activities, if successful, may improve the quality of riparian habitat in the long term and promote future use of the action area for breeding by least Bell's vireos.

### **Tidewater goby**

The Salinas River Lagoon immediately downstream of RMU 7 is within the historic range of the tidewater goby, and together with the most downstream approximately 1.7 river miles of RMU 7 down to the Highway 1 bridge constitutes designated critical habitat for this species (see "Tidewater goby critical habitat" below). Tidewater gobies were believed to be locally extirpated from the Salinas River Lagoon after being last collected there in 1951, and were not observed during surveys in 1991, 1992, or in more recent surveys conducted through 2004 (Service 2005). However, tidewater gobies were recently found by MCWRA in the Salinas River Lagoon in 2013 (2 individuals) and 2014 ( $\geq 67$  individuals) during annual fisheries monitoring surveys for south central California coast steelhead associated with the Salinas Valley Water Project (MCWRA 2014b, Hagar & MCWRA 2015). These were the first surveys in which tidewater gobies were detected in the Lagoon since monitoring efforts were initiated there in 2002, and represent a significant recolonization of historically occupied habitat (see also "Recovery" immediately below). More recent survey data for the Salinas River Lagoon are not yet available.

Current information regarding habitat availability and quality for tidewater goby is not provided in the BA, as this species was not included in the Corps' initial consultation request. The recovery plan for the species (Service 2005) describes habitat conditions in the lower Salinas River and its lagoon at the time it was written, as the site constitutes a recovery sub-unit for the species (see "Recovery" below). The recovery plan states that available tidewater goby habitat encompassed approximately 250 acres in 2005, considered large in relation to other historic and currently occupied sites. Approximately 20 percent of adjacent lands were owned and managed by the Salinas National Wildlife Refuge, the remaining were privately owned. The Salinas River estuary at the time of the recovery plan was designated as "Water Quality Limited" by the State Water Resources Control Board, subject to pollutants and stressors such as fecal coliform from past sewage discharge, pesticides and nutrients from agricultural activities, high salinity/chlorides, and sedimentation/siltation resulting from agriculture, grazing, road construction, land development, channel erosion. Recent analyses indicate water quality issues remain in the lower Salinas River (CCWQCB 2014). The recovery plan also identified exotic fishes and altered hydrology from channelization and water diversions as threats, and indicated the amount of habitat restoration needed here was high. Given similar current land use in the vicinity, we also expect that the latter threats are still present to varying extents.

### *Recovery*

The most downstream portion of the action area is an essential site in the context of the overall recovery of the tidewater goby. The Salinas River Lagoon and the final approximately 1.3 river miles of RMU 7 lie within the Greater Bay Area Recovery Unit and Recovery Sub-Unit GB 11 (Monterey County-Salinas River) for the tidewater goby, and mark the southernmost extent of this sub-unit as defined in the recovery plan (Service 2005). The lower Salinas River is identified as a potential reintroduction site in the recovery plan, thus the recent detection of tidewater gobies in 2013 and again in 2014 in the Salinas River Lagoon following a long period of presumed extirpation from this site marks a significant event in the context of the species' overall recovery. If tidewater gobies continue to occur in the lagoon it is likely they would also be present in perennial portions of the lower Salinas River itself upstream of the Highway 1 bridge, wherever suitable habitat exists in the lower portions of RMU 7. Continued monitoring of the lagoon and lower Salinas River will be essential in understanding the recovery of the tidewater goby overall and in Recovery Sub-Unit GB11.

### **Tidewater goby critical habitat**

The Salinas River Lagoon and the most downstream approximately 1.7 river miles of RMU 7 constitute designated critical habitat Unit MN-2 (Salinas River) for the tidewater goby (Service 2013). As described in the critical habitat rule, this unit constitutes 466 acres and is largely and approximately equally under federal and private ownership. At the time of listing Unit MN-2 was outside the known occupied range of the tidewater goby, but was nonetheless determined to be essential for the conservation of the species. The area in Unit MN-2 was identified as a potential reintroduction site in the recovery plan (Service 2005). MN-2 would provide habitat

for tidewater gobies dispersing south from Bennett Slough and Moro Cojo Slough, either naturally or via reintroduction, which may serve to decrease the risk of extirpation of this local metapopulation. Unit MN-2 also allows for connectivity between tidewater goby source populations and thereby may support gene flow and metapopulation dynamics within the Greater Bay Area Recovery Unit. This unit is one of only three locations in Monterey County that have harbored tidewater goby, and one of two subpopulations in the metapopulation described in the recovery plan. Therefore, this unit is especially important for ensuring the viability of the metapopulation (Service 2013).

Unit MN-2 possesses the primary constituent element that is needed to support the tidewater goby. On an intermittent basis, MN-2 possesses a sandbar across the mouth of the lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary, and thereby provides relatively stable conditions (PCE 1c). PCEs 1a (substrates suitable for construction of burrows for reproduction) and 1b (submerged and emergent aquatic vegetation providing protection from predators and high flow events) occur throughout the unit, although their precise location during any particular time period may change in response to seasonal fluctuations in precipitation, tidal inundation, and water management of the Salinas River system.

### **California red-legged frog**

The action area is located within the current range of the California red-legged frog. Designated critical habitat is not found within or downstream of the action area, with the nearest units approximately 2.6 miles from the nearest riverside parcel in RMU 3 and 3.1 miles from RMU 4 (MCWRA 2016a). Protocol surveys for California red-legged frogs were not conducted for this Project, but frogs have been recorded within and near downstream portions of the action area (CNDDDB 2016, MCWRA 2016a). Subadult frogs were observed in 2008 and 2009 at the site of the then-future Salinas River Diversion Facility in RMU 7 near river mile 5, on the east bank of the Salinas River in streamside emergent vegetation. In 1999, a juvenile California red-legged frog was observed along the edge of the Salinas River between the lagoon and the diversion dam site (MCWRA 2016a). Near the action area, California red-legged frog larvae were found in 2011 southwest of RMU 6 in the former Fort Ord's Toro Pond, adjacent to El Toro Creek and approximately 3.0 river miles upstream from its confluence with the Salinas River (Bruce Delgado, pers. com.). Frogs have also been reported from Moro Cojo Slough (2007) and near Elkhorn Slough (2007) approximately 5 linear miles north of the Salinas River in RMU 7 (CNDDDB 2016). Most of the action area and adjacent uplands are in private ownership, and thus have likely never been surveyed for California red-legged frogs.

The BA (Table 6) indicates that RMUs 1, 6, and 7 are most likely to support California red-legged frogs, with the remainder of the action area providing low habitat suitability. There are no known breeding locations in the action area and suitable breeding habitat is limited, but non-breeding aquatic and riparian habitat has been identified at scattered locations along the mainstem of the Salinas River (MCWRA 2016a). RMU 1 provides non-breeding habitat but there are no known occurrences within 10 miles of the channel, and RMUs 1 to 5 lack nearby

breeding habitat and there are no known observations within 5 miles. Suitable habitat is more prevalent in the lower portions of RMU 6 and in RMU 7. It is likely that the availability of aquatic habitat preferred by California red-legged frogs (still or slow-moving backwaters and pools) and its suitability for breeding varies with precipitation and other conditions in the Salinas River system. Upland habitat is present in the action area during at least portions of the year depending on flows in the Salinas River, while a range of habitat types in the action area including roads and disturbed areas may provide dispersal habitat, especially during wet weather. There is a low potential that California red-legged frogs could use habitat in Bryant Canyon Channel and San Lorenzo Creek. The probability of encountering any life stage of the California red-legged frog in the action area would be greater during the wet season.

### *Recovery*

The action area is wholly within the Diablo Range and Salinas Valley (RMUs 1, 2, 5, 6 and most of RMUs 3 and 4) and Central Coast (small portions of RMUs 3 and 4 and all of RMU 7) Recovery Units described in the recovery plan for the California red-legged frog (Service 2002). The recovery status of the California red-legged frog in the Diablo Range and Salinas Valley Recovery Unit was considered “medium” at the time the recovery plan was written with threats identified from agriculture, grazing, mining, non-native species, recreation, urbanization, and water management/diversions, while the species’ status in the Central Coast Recovery Unit was considered “high” though a similar suite of threats remained in that unit. The lower half of RMU 6, all of RMU 7, and a tributary of the lower Salinas River (El Toro Creek) are also within the Watsonville Slough-Elkhorn Slough Core Recovery Area (Core Area 19, previously referred to as the Salinas River-Pajaro River Core Area in the recovery plan) within the Diablo Range and Salinas Valley Recovery Unit. Core areas are locations targeted for development and implementation of management and protection plans for the California red-legged frog. The Watsonville Slough-Elkhorn Slough core area encompasses approximately 201,897 acres and was selected because it was currently occupied, serves as a source population providing colonizers to nearby areas, and provides necessary connectivity between known populations (Service 2002). Conservation actions identified for the Watsonville Slough-Elkhorn Slough Core Area include protect existing populations, protect habitat connectivity, reduce impacts of agriculture, improve water quality, and reduce impacts of urbanization.

## EFFECTS OF THE ACTION

### **Least Bell’s vireo**

The least Bell’s vireo has not been reported within the action area in recent years and a breeding population is currently not known to exist along the Salinas River, but the species has been observed sporadically since 1993 as near as 20 river miles upstream of RMU 1. Most of the action area is in private ownership and has not been recently surveyed, with the last systematic surveys conducted in 2001. Suitable breeding habitat occurs, predominantly in RMUs 1 and 2, and maintenance activities may result in an increase in breeding habitat over the course of the

Project which could attract vireos. While we consider the current probability of occurrence to be low, least Bell's vireos may occur and breed in the action area, thus the Project could have direct and indirect effects on vireos.

A maximum of approximately 875 total acres of habitat within all RMUs would be directly affected during the course of the proposed Project, with 700 acres constituting vegetated areas 250 acres of which are *Arundo*-dominated (MCWRA 2016c). Some or all of the total acreage could be affected in multiple years of the Project through re-treatment and ongoing maintenance. Removal of native shrubs and trees outside of the breeding season could decrease local breeding and foraging habitat for vireos colonizing the site in the future, and if occurring within or adjacent to a previously occupied least Bell's vireo breeding territory, could make the site less suitable for vireos returning the following spring given the species' high site fidelity. The latter could indirectly harm vireos by decreasing foraging opportunities and expose adults forced to search for a new breeding site to increased risk from predation, expenditure of energy, and lowered reproductive success. Most of these impacts would likely manifest themselves incrementally and be very difficult to observe or quantify.

*Arundo* treatment and removal during the breeding season could directly harm vireos using this plant for nesting but not detected during surveys by destroying nests containing eggs or nestlings or disturbing adults caring for young, or indirectly by lowering habitat suitability and displacing returning adults from a previously used territory. Improper handling of removed *Arundo* plant parts could also degrade downstream vireo habitat if this material entered the river system, but the proposed conservation measures to properly handle and dispose of this material should minimize this impact. In the longer term the proposed vegetation management activities should benefit least Bell's vireos, in particular the removal of *Arundo* should promote the development of far more suitable native vegetation.

Mitigation planting of larger willows, cottonwoods and other species should have long-term benefit for least Bell's vireos, but in the short term the activity associated with mitigation planting, if conducted during the breeding season, could harm nesting vireos by harassing them and interfering with normal breeding behavior and caring of young, or by displacing adults and fledglings from their territory. Concentrating this activity outside the breeding season and conducting pre-activity surveys for vireos during the breeding season would avoid and minimize these effects.

Least Bell's vireos could be exposed to herbicides (glyphosate and/or imazapyr) applied during the breeding season for *Arundo* removal through drift or by coming into contact with recently treated vegetation. Studies indicate that both glyphosate and imazapyr have low toxicity to avian receptors (EXTOXNET 1996, EPA 2000, Fisher et al. 2003, Durkin and Follansbee 2004, EPA 2007, Kegley et al 2010, MOEEA 2012). The Service classifies glyphosate and imazapyr as Class 0 pesticides for ecotoxicity to small avian species: based on the results of a screening-level hazard assessment, we consider these pesticides to be practically nontoxic to small avian species (White 2007). Herbicide application during the breeding season will be preceded by surveys for least Bell's vireos and adequate buffers will be established around any nests detected, thus we

expect direct effects from herbicide application to be minimal. Herbicide application could indirectly affect least Bell's vireos if non-target native vegetation is inadvertently killed by overspray by reducing suitability of foraging or nesting habitat within active territories or displacing vireos returning to breeding sites. Proper application of herbicides and avoidance of days when wind or rainfall may disburse herbicides will minimize the likelihood of these effects.

Vegetation and sediment removal and side channel creation and grading have the potential to alter the overall geomorphology and hydrology of the Salinas River within and upstream of the action area in unexpected ways. This could in turn potentially alter the distribution and/or availability of suitable riparian habitat for vireos, e.g. by increasing bank erosion or mobilizing sediments that collect around and cover native plants in downstream areas. Hydraulic modeling results indicate that the Project design and amount of sediment to be removed annually should not result in streambed degradation of the Salinas River within the action area, and should lead to more natural floodplain conditions and improved streamside native habitat conditions over the life of the Project. In the short term we do not expect maintenance activities to degrade or reduce the availability of habitat for least Bell's vireos overall, and in the long-term habitat suitability and availability should improve.

Grading and recontouring of side channels following vegetation removal and associated use of heavy equipment could temporarily reduce suitable riparian habitat for least Bell's vireos by compacting soils within and adjacent to side channels and in turn inhibiting the growth or regeneration of native plants. Given that the location of side channels has been designed to minimize removal of native vegetation and side channels have been designed to become active during relatively frequent (i.e. 5-year) flood events, we expect that any such impacts would be limited and temporary.

Disturbance from Project activities conducted during the March 15 – September 15 breeding season, including presence of workers, vehicles, heavy equipment and associated noise, dust, vibration, and other disturbance, could cause least Bell's vireos to leave or avoid suitable habitat, despite conservation measures to avoid nests and reduce noise in breeding habitat. Moving to an unfamiliar territory may expose adults to exhaustion and reduced fitness or starvation associated with decreased foraging opportunities, increased predation risk, adverse inter- and intra-specific interactions, and decreased probability of nesting success. If an active nest is present juveniles could be flushed from protected areas, increasing predation risk. Many project activities would occur outside of the nesting season, but if least Bell's vireos are present in work areas during the breeding season the proposed conservation measures, including establishing adequate buffer zones around nests and territories, would minimize these effects.

Human presence may attract predators to an area. Predators as well as parasitic cowbirds may be able to "home in" on least Bell's vireos that become agitated by human presence and destroy or parasitize vireo nests (TNC 1997, Chace et al. 2002). Trash left during or after Project activities could attract predators including coyotes (*Canis latrans*) and raccoons (*Procyon lotor*) that could prey on least Bell's vireo eggs or nestlings. This potential impact would be reduced or avoided by the proposed control and removal of trash during the Project.

Activities including excavation, compaction and grading occurring within or adjacent to riparian habitat during the breeding season may produce noise and negatively affect least Bell's vireos. Many songbirds, including the least Bell's vireo, are sensitive to prolonged, loud noises; construction-related noise and vibrations can adversely affect breeding and nesting behavior and reduce nesting success. If construction noise increases after a least Bell's vireo has established a nest or breeding territory near the project, nest abandonment could occur, resulting in a failed breeding attempt, death of eggs and fledglings, exposure of adults to increased predation risk, negative inter- and intraspecific interactions, and decreased foraging opportunities. Moreover, least Bell's vireos 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 locate and evade potential predators (Scherzinger 1979). Increased ambient noise levels may hinder the ability of the species to cue in on these signals. The Service uses 60 decibels (dB) as a practical threshold above which substantial impacts to the least Bell's vireo may occur. 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. Avoiding the use of heavy equipment and noise-generating activities during the breeding season, and limiting noise levels during the breeding season in riparian habitat occupied by vireos by establishing adequate buffers, would reduce these impacts.

In summary, given recent occurrences of the species upstream of the action area, the presence of suitable breeding habitat, and proposed activities in riparian habitats, the Project could adversely affect some least Bell's vireos by removing or degrading suitable habitat or by harassment leading to avoidance of or displacement from the action area and disruption of normal behavior. The likelihood that the species would be present is relatively low, many activities would take place outside of the breeding season, and the Corps and applicant have proposed avoidance and minimization measures to reduce potential impacts. Based on these factors, we anticipate that few least Bell's vireos are likely to be killed or injured by the proposed project.

#### *Effects on Recovery*

We anticipate that effects on recovery of the least Bell's vireo will be minimal in the short term, and likely beneficial in the long term. The Salinas River corridor is an historically occupied site and is targeted in the draft recovery plan for reestablishment of a breeding population (Service 1998b). A stable breeding population is not currently known to exist on the Salinas River and least Bell's vireos have been observed sporadically upstream of the action area since 1983. The current likelihood of least Bell's vireos occurring in the action area is relatively low, though vireos are more likely to occur in southern portions of the action area. The Project would impact up to 700 total acres of vegetation annually representing 4.2% of the vegetation in the RMUs, and 250 acres of which is *Arundo*-dominated. Restoration of larger native shrubs and trees would occur concurrently. We therefore expect that the Project will not significantly reduce foraging or breeding habitat for least Bell's vireos or affect their numbers or distribution in the short term.

The draft recovery plan emphasizes conservation and management of riparian habitat within the historical range of the least Bell's vireo including the reduction of threats from invasion by exotic plants including *Arundo*. The Project would emphasize removal of *Arundo*, removal of in-channel sediment, and creation of side channels, together designed to produce more natural floodplain behavior and maintain or increase the quantity and quality of native vegetation types over the 10-year work period. If the Project results in the predicted improvements it could promote recolonization of the Salinas River by least Bell's vireos and contribute to the species' overall recovery in the long-term, and increase the likelihood that vireos could occupy and breed in the action area over the life of the project.

Disturbance from ongoing maintenance activities during the breeding season could cause vireos to avoid or leave the area or disrupt breeding, diminishing or negating Project benefits on recovery. Pre-work surveys, establishment of nest buffers, and the tailing-off of management actions in later Project years would avoid or minimize these impacts. The Corps would contact the Service if vireos are observed, providing the opportunity to adjust activities if needed. The proposed surveys could provide valuable information for recovery efforts, given that the action area is largely under private ownership and much of it has not been systematically surveyed. Thus we expect the project to result in no long-term reductions, and potentially a local increase, in least Bell's vireo numbers and distribution, and to potentially contribute positively to the species' recovery.

#### *Summary of effects to least Bell's vireo*

Based on the relatively low likelihood of occurrence, limited amount of breeding habitat (at least at the start of the project), the minimal temporary loss and potential long-term gain of riparian habitat including breeding habitat, and proposed avoidance and minimization measures to be implemented by the Corps and applicant, we conclude that few least Bell's vireos are likely to be killed or injured as a result of Project activities. The Project would affect at most a small number of least Bell's vireos in the short term if any occur, primarily in the form of habitat degradation or removal and disturbance leading to avoidance of the action area, while over the long-term the project is expected to have a neutral or positive effect on the species. We anticipate no long-term negative effects to the overall population, breeding and reproductive capacity, or recovery of the least Bell's vireo due to the Corps' proposed action, and the Project may contribute positively to the species' recovery if it is successful in removing *Arundo* infestations and promoting more natural hydrologic and ecological conditions along the lower Salinas River.

#### **Tidewater goby**

Tidewater gobies have recently been detected immediately adjacent to the action area in the Salinas River Lagoon and may be present in downstream areas of RMU 7. Project activities would take place adjacent to but outside of aquatic habitats and precautions would be taken in the event of rain and increased river flows which could activate newly-constructed side channels. Nonetheless project activities could have direct and indirect effects on tidewater gobies.

If rain events or unexpected high flows on the Salinas River activate side channels before excavation is complete and allow tidewater gobies to enter work areas, goby adults, fry and eggs could be inadvertently crushed by workers or construction equipment. Tidewater gobies left stranded in flooded side channels could die from desiccation, suffocation, or opportunistic predation. Side channel construction would take place before November 15 and work would not occur in the event of rain, and a Service approved biologist would survey for and relocate any tidewater gobies found in work areas. Side channels would also be designed to activate in the event of a 2-5 year flow event and provide positive drainage, making these effects less likely. In the long-term, side channel creation may benefit tidewater gobies by creating new areas of suitable habitat adjacent to the main channel.

Survey, capture, and relocation of tidewater gobies could result in injury or death as a result of unintended physical injury, intraspecific competition with individuals at the relocation site, and increased risk of predation. The lack of familiarity with the relocation site could also adversely affect potential breeding, feeding, and sheltering behavior. Use of Service-approved biologists to survey, capture, and move individuals, and relocation of individuals to the Salinas River Lagoon with which they may be more familiar would reduce these effects. We also expect that few tidewater gobies will need to be relocated during the course of the proposed Project as most activities will occur in the dry season and outside of aquatic habitat.

Removal of emergent aquatic vegetation in RMU 7 could negatively affect tidewater goby habitat by reducing the availability of plants used for cover, which could in turn increase predation risk and make gobies more susceptible to being swept downstream by high flow events. Removal of streamside riparian plants and trees could alter goby habitat by raising water temperatures. We expect these effects to be minimal because the applicant proposes to avoid removal of emergent vegetation in areas of potential goby habitat, and the amount of streamside riparian vegetation to be removed would be a small proportion of the total in RMU 7.

The transport of invasive plant materials (e.g. tamarisk, *Arundo*) downstream from vegetation management areas could have negative impacts on tidewater goby habitat in downstream portions of RMU 7 or in the Salinas River Lagoon. Establishment of invasive aquatic and riparian plants has been shown to reduce habitat quality for tidewater gobies (Service 2005). The applicant proposes to carefully control and dispose of nonnative invasive plant materials removed during management activities, and management areas would be retreated for invasive plants as needed during the 10-year Project timeframe, reducing the likelihood of these effects.

Herbicides may adversely affect water quality in RMU 7 or the Salinas River Lagoon. Herbicides drifting into aquatic areas have potential to harm tidewater gobies and eggs or their prey species. The applicant proposes to use glyphosate or imazapyr, herbicides approved for use in aquatic environments. No information is available regarding the toxicity of either of these compounds to the tidewater goby. Toxicity studies of imazapyr in various other species indicate imazapyr is of low to moderate toxicity to fish (TNC 2004, Kegley et al. 2010, MOEAA 2012). Toxicity studies on bluegill sunfish (*Lepomis macrochirus*) and rainbow trout (*Oncorhynchus mykiss*) indicate that Aquamaster (active ingredient glyphosate) is practically non-toxic to these

species (Monsanto 2005). Studies compiled by the Pesticide Action Network indicate that both imazapyr and glyphosate range from not acutely toxic to moderately toxic depending on the fish species (Kegley et al., 2010). Because the toxicity of imazapyr- and glyphosate-containing products can vary significantly between species, a conservative assumption would be that products containing these substances are moderately toxic to tidewater gobies. The concentration that tidewater gobies could be exposed to would be much less than the application concentration due to dilution by river and lagoon waters. We anticipate this concentration will result in minimal toxic effects to tidewater gobies. The applicant would apply herbicides in the dry season outside of aquatic habitats, and avoid application when wind and rain could increase the risk of transport to water in RMU 7. Therefore, we expect that few tidewater gobies would be injured or killed through overspray of herbicides.

Sedimentation into habitats occupied by tidewater gobies may be increased by Project activities in the short-term. Sediments may be mobilized by bar ripping, side channel excavation and grading, removal of in-channel native and invasive non-native vegetation, and changes in the hydrology and sediment transport behavior of the Salinas River. Increased sediment deposition in occupied habitat could harm adults by impairing the efficiency of their gill filaments and exposing them to higher salinities and/or predation as they flee downstream. Sediments could smother tidewater goby eggs, reduce the suitability of substrates for burrow creation, and alter benthic food webs and prey availability. A reduction in phytoplankton can result from increased turbidity, which can in turn reduce zooplankton, in turn reducing benthic macroinvertebrate prey available to tidewater gobies (Henley et al. 2000). We are not able to determine the likelihood or magnitude of these potential effects, given that water management of the Salinas River system and maintenance activities upstream may interact to affect downstream transport and accretion of sediment unpredictably. However, the amount of sediment potentially mobilized by Project activities is expected to represent a small fraction of that typically found in Salinas River flows. The project is designed to achieve the long-term goal of reducing flow velocities overall in the Salinas River, with model results predicting no increase in overall sediment mobilization. The proposed surveys for tidewater gobies and water quality monitoring of the lower Salinas River and lagoon should provide information to help better assess the extent, if any, of these effects.

Unintended spills of fuel, oil, herbicides, and other chemicals could harm tidewater gobies if these materials were transported to aquatic habitats. These materials could poison or otherwise injure or kill tidewater gobies or require additional, unplanned clean up or restoration of affected areas. The Corps and MCWRA propose to conduct mixing of herbicides and fueling, washing, and maintenance of vehicles and equipment in locations where the risk of transport to sensitive habitats is minimized and to prepare a spill response plan. We anticipate these measures would minimize the risk of releasing contaminants into the channel and that such spills are unlikely to adversely affect tidewater gobies.

It is unclear whether the Project could alter the regime of lagoon breaching downstream of the action area, and if this occurred how it would affect the tidewater goby. The Project was designed using hydrological modeling to increase the overall carrying capacity of the Salinas River during high flow events to reduce the probability of flooding on adjacent lands, with the

predicted effects varying by RMU. The Salinas River system is also highly managed for flood control and water storage purposes, and incorporates a flow prescription to balance these needs with conservation of steelhead that involves both lagoon breaching and water releases (MCWRA 2005). An increase in the rate of breaching of the Salinas River Lagoon and number of days it is open could have negative effects on tidewater gobies, which are adapted to a brackish environment and may be “washed out” of lagoons during high flow events (Service 2007). Conversely, the Project could benefit tidewater gobies if increased carrying capacity of the Salinas River resulted in a lagoon breaching regime more favorable to gobies. Thus we are not able to estimate the likelihood, direction, or magnitude of any effects to the tidewater goby from river or reach-scale hydrological changes and effects on lagoon breaching, however we expect these to be minimal, and the Project may have overall benefits if its intended goals are achieved.

#### *Effects on Recovery*

We do not anticipate that the proposed action would substantially affect conservation of the tidewater goby in the Greater Bay Area Recovery Unit or the long-term survival and recovery of the species. The lower Salinas River including its lagoon is within recovery Sub-Unit GB-11 and was identified in the 2005 recovery plan as a potential reintroduction site. The observation of tidewater gobies in the Salinas River Lagoon in 2013 for the first time in more than 60 years constitutes a significant milestone in the species' recovery, and gobies may still be present in or downstream of the action area. The tidewater goby recovery plan emphasizes the importance of conserving population units and metapopulation dynamics. There could be negative effects to individual gobies from the Project in the short term, but these should be minimal with implementation of the proposed conservation measures, and no long-term effects to the local population are expected.

While there is some uncertainty regarding river-scale changes to hydrology and sediment mobilization and transport that could result from Project activities, modeling results suggest that in the long term the Project should increase the carrying capacity of the Salinas River and reduce overall flow velocities. This result, combined with the creation of side channels in RMU 7, may in turn increase the availability or quality of suitable goby habitat in Sub-Unit GB-11, and could potentially lead to a more favorable regime of lagoon breaching if the frequency of flooding of lands adjacent to RMU 7 is successfully reduced. The proposed tidewater goby surveys and habitat assessments of the lower Salinas River and lagoon will also contribute essential knowledge to tidewater goby recovery in Sub-Unit GB-11 and help assess the extent to which Project activities may be affecting the species locally. The proposed Project may thus help improve the stability of the local population, and in doing so contribute to the recovery of the species in the long-term.

#### *Summary of effects to tidewater goby*

Based on the likely presence of tidewater gobies in the Salinas River Lagoon and lower areas of RMU 7, we expect that the proposed Project could adversely affect tidewater gobies in the short term. Effects including increases in sedimentation, overspray and transport of herbicides into

aquatic habitat, and the potential need to capture and relocate gobies in the action area could result in death or injury of tidewater gobies, and a portion of the suitable habitat available in recovery Sub-Unit GB-11 may be directly disturbed or indirectly affected. We expect these effects to be relatively small and primarily temporary, and with implementation of the proposed avoidance and minimization measures we conclude that a small proportion, if any, of the tidewater gobies present are likely to be killed or injured in the short term. We anticipate no long-term negative effects to the local population, or to the reproductive capacity or recovery of the species. The Project may contribute positively to the species' recovery in the long term by removing *Arundo* infestations and promoting more natural hydrologic and ecological conditions along the lower Salinas River.

#### **Tidewater goby critical habitat**

Increased sediment mobilization or unexpected changes in sediment transport or hydrology resulting from maintenance activities may result in temporary impacts to or loss of substrate used for burrow construction (PCE 1a) in critical habitat Unit MN-2. However, we expect based on the Project design that any negative effects would be temporary and small relative to baseline conditions in the Salinas River, and that long-term flood control benefits from the Project may increase the stability of substrate in MN-2. Vegetation removal, transport of invasive plant materials downstream from vegetation management areas, and unexpected increases in sediment mobilization could cause loss of aquatic vegetation (PCE 1b). We expect that implementation of the proposed conservation measures would minimize the risk of new invasive plant infestations, and that any increases in sediment input to tidewater goby habitat in MN-2 would be temporary and small relative to normal levels. Unexpected large-scale changes in Salinas River hydrology resulting from the Project could require changes in the timing or frequency of manual breaching of the sandbar at the mouth of the Salinas River Lagoon (PCE 1c) and reduce the stability or extent of suitable habitat. However, we expect any such effects to be intermittent and temporary. Moreover, Project activities and locations have been designed to increase the flood carrying capacity of the river, thus may be expected to reduce the likelihood that the lagoon would require more frequent or unexpected manual breaching in the long term. Annual habitat monitoring in MN-2 would also provide important information that could be used to incorporate conservation of tidewater goby habitat into ongoing river management regimes.

#### *Summary of effects to tidewater goby critical habitat*

We expect the proposed action may temporarily alter or reduce the availability of substrate (PCE 1a) in tidewater goby critical habitat Unit MN-2, but that any effects would be temporary and relatively small. There could be some loss or degradation of aquatic vegetation (PCE 1b) from maintenance activities or due to transport of invasive plants and sediment, but again these effects should be small and short term. Unexpected changes in Salinas River hydrology could intermittently degrade PCE 1c and the stability of lagoon conditions, but the Project has been designed to promote river-scale changes which should reduce the likelihood of this effect. Thus, we expect adverse effects to tidewater goby critical habitat may occur, but they would likely be short term and minimal in a range-wide context, and that in the long run the Project may improve

the quality and stability of the PCEs in the action area.

### **California red-legged frog**

California red-legged frogs have been observed in RMU 7 and within 3 miles of RMU 6. Limited persistent areas of slow-moving or ponded water may be suitable for breeding in some years, and suitable aquatic non-breeding, upland, and/or dispersal habitat has been identified in areas of RMUs 1, 6 and 7 and may occur in other areas depending on annual conditions. California red-legged frogs are expected to occur during some Project activities, though work conducted in the dry season will avoid periods when frogs are most active.

Vegetation management including native plant removal and trimming and non-native plant treatment would remove or disturb a maximum of approximately 700 acres of vegetation annually, any of which could provide sheltering, foraging, or dispersal habitat for the California red-legged frog during the wet season or if found in proximity to persistent water. Habitat loss has the potential to cause injury or death of California red-legged frogs if they are forced into adjacent, less suitable habitat. We expect these impacts would be reduced with implementation of the proposed conservation measures. In the long term we expect that vegetation would naturally regenerate in most maintenance areas, and is likely to be replaced in created side channels with more suitable aquatic and riparian habitat that may lead to an eventual increase in California red-legged frog numbers. This could potentially increase the likelihood that frogs would be present during maintenance activities in later years of the Project and be susceptible to impacts described below, but the frequency and extent of maintenance activities would decrease over the life of the Project and all conservation measures would still be in place.

All California red-legged frogs that occur in the action area could be adversely affected by Project activities. Injury or mortality could occur from animals being crushed by heavy equipment, vehicles, debris, and worker foot traffic and activities such as excavation of side channels, grading, bar ripping, sediment stockpiling, and vegetation clearing. Frogs could also become trapped and die in upland sheltering habitat if it is crushed or covered. California red-legged frogs may experience a significant disruption of normal behavioral patterns from worker foot traffic and activities such as sediment excavation and their associated noise and vibration to the point that reaches the level of harassment. This disruption could cause California red-legged frogs to leave or avoid suitable habitat and may increase the potential for predation, desiccation, competition for food and shelter, or strike by vehicles. These disruptions would be temporary and frogs are expected to return to areas of habitat after activities are completed. Pre-construction surveys, conducting many activities in the dry season and outside of water and wetland habitats, and the relocation of California red-legged frogs from work areas by a Service-approved biologist would reduce these impacts.

Mitigation planting of native tree species should have long-term benefit for California red-legged frogs by maintaining the quality of riparian habitat, but in the short term the equipment and worker traffic associated with this work may harm or injure frogs directly, or may harass individuals and displace them from suitable habitat to unfamiliar areas where they are vulnerable

to predation and other threats. These activities will have less effect when occurring outside the wet season and conducting pre-activity surveys for California red-legged frogs during the wet season would avoid and minimize these effects.

California red-legged frogs could become trapped and die in excavated or backfilled trenches. Examination of trenches before the start of work, use of exclusion fencing, and provision of escape ramps should minimize this impact.

California red-legged frog eggs, tadpoles, juveniles or adults may be exposed directly or indirectly to herbicides (imazapyr or glyphosate) used to treat invasive plants through direct overspray of wetlands or upland habitats, aerial drift, or contaminated runoff from treated areas. No information is available regarding the toxicity of glyphosate or imazapyr products specifically to California red-legged frogs, but studies of products containing these compounds with other amphibians indicate that it is likely the surfactants used in some formulations to improve their efficiency, and not the active ingredient itself, that are toxic (Lajmanovich et al. 2003, Edington et al. 2004, Howe et al. 2004, Govindarajulu 2008, Yahnke et al. 2013). Aquatic products containing glyphosate and imazapyr are generally formulated without the use of surfactants to reduce their toxicity. The applicant proposes to use a glyphosate or imazapyr formulation approved for use in aquatic environments, therefore, we anticipate the adverse effects of herbicide application on California red-legged frogs would be minimized and controlled. Nonetheless, we anticipate some level of injury or mortality could potentially occur as a result of the use of herbicides during the Project.

Project activities in the Salinas River including vegetation removal, side channel creation, and sediment removal may in the short term increase erosion and alter stream hydrology, potentially resulting in increased channel flows in localized areas and greater transport of sediment into habitats occupied by California red-legged frogs. Sediments could smother frogs directly, increased flows could flush frogs, eggs and tadpoles downstream from breeding areas, and sediment deposition could bury areas of suitable aquatic or riparian habitat. While some California red-legged frogs may be harmed by these effects, they are expected to be localized and temporary because the Project has been designed to increase the overall capacity of the Salinas River and reduce flow velocities in the long term, with a likely reduction in overall sediment transport.

Transport of stockpiled soil, spilled oil, fuel or other contaminants into aquatic, wetland, and upland habitat could degrade habitat to a degree where California red-legged frogs are injured or killed. The proposed avoidance measures, including conducting work in the dry season, avoiding work in or adjacent to water or wetlands, conducting fueling and vehicle washing away from aquatic habitats, and preparing a hazardous spill response plan would reduce these impacts.

California red-legged frogs can disperse overland in mesic conditions if substantial rainfall (greater than 0.5 inch of rain in a 24-hour period) occurs. During such periods of rainfall, we expect a higher likelihood of California red-legged frogs occurring in the Project area. Any amphibians moving through the Project site would be at risk of injury or death caused by

vehicles, equipment, or workers, and fencing and excavation of linear trenches could entrap frogs and interfere with their movement. The applicant's proposal to conduct most Project activities between June 1 and November 15 when California red-legged frogs are less likely to be active, to stop work in the event of rain, and cover or provide escape ramps for open trenches should minimize these impacts.

Capture and relocation of California red-legged frogs could result in injury or death as a result of improper handling, containment, transport, or release into unsuitable habitat. Although survivorship for translocated California red-legged frogs has not been estimated, survivorship of translocated wildlife in general is reduced due to intraspecific competition, lack of familiarity with the location of potential breeding, feeding, and sheltering habitats, and increased risk of predation. Using Service-approved biologists, limiting the duration of handling, and requiring the proper transport of individuals should reduce these impacts, and overall the translocation of individuals from work areas would likely reduce the level of mortality that otherwise would occur if California red-legged frogs were not removed.

Observations of diseased and parasite-infected amphibians are now frequently reported. Releasing amphibians following a period of captivity, during which time they can be exposed to infections, may cause an increased risk of mortality in wild populations. Amphibian pathogens and parasites can also be carried between habitats on the hands, footwear, or equipment of fieldworkers, which can spread them to localities containing species that have had little or no prior contact with such pathogens or parasites. 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 only attacks the parts of an animal's skin that have keratin (thickened skin), such as the mouthparts of tadpoles and the tougher parts of adults' skin, such as the toes. It 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. Relocation of individuals captured from the Project area could contribute to the spread of chytrid fungus. In addition, infected equipment or footwear could introduce chytrid fungus into areas where it did not previously occur. The Corps' and applicant have proposed to follow the Declining Amphibian Populations Task Force's Fieldwork Code of Practice to minimize the spread of chytrid fungus and other pathogens during the Project.

Trash left during or after Project activities could attract predators to the work site, which could in turn prey upon California red-legged frogs. For example, raccoons (*Procyon lotor*) and feral cats (*Felis catus*) are attracted to trash and also prey opportunistically on the California red-legged frog. This potential impact would be reduced or avoided by the proposed control of waste products at all work sites.

Uninformed workers could disturb, injure, or kill California red-legged frogs. The potential for this to occur would be reduced by educating workers on the presence and protected status of these species and the measures that are being implemented to protect them during Project

activities. The use of flagging to demarcate work areas would further reduce these potential impacts by preventing workers from encroaching into environmentally sensitive habitat.

In summary, the proposed action may injure or kill some California red-legged frogs directly, harass individuals and displace them from habitats, or remove suitable habitat, given the previous occurrence of the species in downstream portions of the action area and the availability of aquatic breeding, non-breeding, upland, and dispersal habitat in some locations. However, the Corps and MCWRA have proposed avoidance and minimization measures to reduce these impacts, would avoid work in aquatic and wetland habitats, and would conduct most Project activities in the dry season to reduce the likelihood that California red-legged frogs would be present. Based on these factors and the temporary nature of most impacts, we anticipate that few California red-legged frogs are likely to be killed or injured during this work.

#### *Effects on Recovery*

We do not expect the proposed Project to substantially affect the recovery of the California red-legged frog in the Diablo Range and Salinas Valley or Central Coast Recovery Units or within the Watsonville Slough-Elkhorn Slough Core Recovery Area. The proposed Project would not increase the threats currently impacting the California red-legged frog in these Recovery Units or Core Area as identified in the Recovery Plan and described above. The Project would not preclude the Service's ability to implement recommended recovery actions in these areas including protecting existing populations and improving water quality (Service 2002). Project impacts would be largely temporary, affect a small proportion of the available habitat within the recovery areas most of which is of low to moderate suitability and currently unoccupied, and would not affect the capacity of the Watsonville Slough-Elkhorn Slough Core Recovery Area to serve as a source population or provide connectivity between known populations. The Project may benefit recovery for the species by increasing in the availability of suitable habitat in the long term, and pre-activity surveys may yield data important to recovery as many areas of the Salinas River are under private ownership and have never been surveyed. Thus we do not believe the proposed Project would substantially affect the conservation and recovery of the California red-legged frog and may provide a net recovery benefit.

#### *Summary of effects to the California red-legged frog*

Based on the prior occurrence of the species and presence of suitable habitat in limited portions of the action area, we expect that the proposed Project could harm or harass some California red-legged frogs in the short term. Use of heavy equipment and the potential need to capture and relocate individuals could result in death or injury of California red-legged frogs, while removal of vegetation, mobilization of sediments, and overspray and transport of herbicides could reduce the quality and availability of habitat or harm frogs by displacing them to less secure locations. We expect these effects to be relatively small and primarily temporary, and with implementation of the proposed avoidance and minimization measures and dry season work windows we conclude that a small number of California red-legged frogs are likely to be killed or injured during the Project. We anticipate no long-term effects to the local population or to the

reproductive capacity or recovery of the species. The Project may contribute positively to the species' recovery in the long term by promoting more natural hydrologic and ecological conditions along the lower Salinas River and increasing the availability of suitable habitat in and adjacent to the created side channels.

#### 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 not aware of any non-Federal actions that are reasonably certain to occur. Activities within and adjacent to the action area (e.g. agriculture, water management) are not expected to change in the near future. Thus impacts to listed species potentially associated with these activities, such as the attraction of cowbirds which could parasitize nesting least Bell's vireo nests or the erosion and runoff of sediment and agricultural chemicals into aquatic habitats, would likely continue at present levels.

#### CONCLUSION

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 status of the least Bell's vireo, tidewater goby, and California red-legged frog as the basis to assess the overall effect of the proposed action on each species.

#### Least Bell's vireo

##### Reproduction

Noise, vibration, and other disturbance associated with maintenance activities conducted during the breeding season could cause least Bell's vireos to avoid or leave the action area or reduce their nesting success, and attraction of nest predators and parasitic cowbirds could lead to nest failure. Removal of riparian vegetation, including *Arundo* if used for nesting, could reduce availability of breeding habitat in the short term. Few if any least Bell's vireos are expected to be present in the short term given the limited availability of suitable habitat and current absence of the species in Project RMUs. Project activities could result in habitat conditions more suitable to vireos in the long term, but this may also increase the likelihood of impacts. To minimize Project effects on reproduction of the least Bell's vireo the Corps proposes to conduct surveys, set protective buffers around nests, control trash that may attract nest predators, and contact the Service if vireos are detected. These actions should effectively reduce Project-related impacts to the species' reproduction. Therefore, we expect the local effect of the Project on reproduction of the least Bell's vireo to be minimal in the short term and minimal or potentially positive in the

long term, and conclude that the proposed Project will not appreciably reduce the species' ability to reproduce rangewide.

### Numbers

The area of direct impacts encompasses a relatively small proportion of least Bell's vireo foraging and breeding habitat available locally and regionally. The Corps also proposes measures to reduce impacts that could disturb individuals or nests, such as establishing buffers around nests and avoiding nighttime work. The species has not been observed in the action area and only sporadically in upstream areas in recent years, though surveys have been limited and not conducted in the action area since 2001. Detecting the species in the action area would be significant and least Bell's vireos have been recolonizing areas of suitable habitat in recent years, but we expect that with the proposed conservation measures adverse effects from the Project would be minimal and few if any least Bell's vireos would be killed or injured. The Project would concurrently restore riparian habitat and may result in a net long-term gain in habitat quantity and quality. This may attract vireos to the Project site in the future and promote local reproduction. Project activities could in turn adversely affect vireos attracted to the project site, but implementation of conservation measures should minimize these impacts. Therefore, we have determined that implementation of the proposed Project is not expected to appreciably reduce numbers of the least Bell's vireo locally or rangewide in the short term, and may increase numbers in the long term pending success of the proposed maintenance activities at promoting a more natural river channel and habitats.

### Distribution

The project is located outside of the current known breeding range of the least Bell's vireo but is within the historical breeding range which includes the Salinas River. Since 1983, only sporadic occurrences of individuals have been reported in the upstream vicinity. While least Bell's vireos have recolonized some historically occupied sites in recent years, there is no current evidence of a breeding population along the Salinas River, though recent survey data from the action area are lacking. We expect the probability of occurrence to be relatively low in the action area and likely limited to areas in RMU 1 and 2. The project would disturb or remove up to approximately 700 acres of vegetation annually of which approximately 250 acres would be *Arundo*-dominated, constituting a relatively small proportion of habitat available locally and regionally. The Project would concurrently restore native riparian habitat, and is designed to promote a more natural river channel that may increase availability of suitable riparian habitat for the least Bell's vireo. Project activities could cause the species to avoid or leave the action area, but conservation measures proposed by the Corps would reduce the likelihood of impacts in the short and long term. Detection of the species within the action area especially if it were found to be breeding would be significant; we consider this to be more likely in the long-term. Therefore, we conclude that the project will not reduce the distribution of the least Bell's vireo at the local or rangewide level, and may contribute to the species' long-term recolonization of previously occupied breeding habitat and range expansion.

### Recovery

The action area lies along the historically occupied Salinas River, targeted for reestablishment of a breeding population in the least Bell's vireo draft recovery plan. A breeding population is not currently known to exist on the Salinas River, and the likelihood of least Bell's vireos occurring on the project site is relatively low and limited to areas in RMU 1 and 2. The project would disturb or remove riparian habitat in the short term, much of which is *Arundo*-dominated, and be balanced by concurrent habitat restoration and, potentially, a long-term net gain in suitable breeding habitat. Project activities may cause least Bell's vireos to avoid or leave the action area but proposed conservation measures should minimize these effects. Maintenance activities could promote future use of the site for breeding by least Bell's vireos and contribute to the species' overall recovery, though ongoing Project activities could disrupt breeding and diminish or negate the benefits of restoration. Pre-activity surveys, establishment of nest buffers, and other proposed measures would avoid or minimize these impacts. The Corps would contact the Service if vireos are detected, providing the opportunity to adjust conservation measures, and the proposed surveys could inform recovery efforts. Thus we expect the Project to result in no appreciable long-term impacts to least Bell's vireo numbers and distribution, and it may contribute positively to the species' recovery along the Salinas River and overall.

### Conclusion for the least Bell's vireo

After reviewing the current status of the least Bell's vireo, the environmental baseline for the action area, the effects of the proposed Salinas River Stream Maintenance Program and the cumulative effects, it is the Service's biological opinion that the Salinas River Stream Maintenance Program, as proposed, is not likely to jeopardize the continued existence of the least Bell's vireo, because:

1. The project would not appreciably reduce reproduction of the species either locally or rangewide;
2. Although survey information is very limited and date, least Bell's vireos appear to be rare in the action area, thus the project would likely only affect a small number of individuals, and thus would not appreciably reduce numbers of the least Bell's vireo at the local level or rangewide;
3. The project would not reduce the species' distribution either locally or rangewide;
4. The project would not cause any effects that would preclude our ability to recover the species, and could provide useful data relevant to its recovery;
5. Project activities may increase the quantity and quality of suitable habitat for least Bell's vireos in the long term, and contribute positively to their overall recovery.

### **Tidewater goby**

#### Reproduction

The proposed Project may temporarily reduce the availability of tidewater goby breeding habitat

locally, and maintenance activities may harm a proportion of any tidewater gobies breeding in the lower Salinas River and lagoon or their eggs and young. Any loss of breeding habitat is expected to be temporary and would represent a relatively small portion of breeding habitat available rangewide. Conservation measures would limit direct and indirect effects to breeding habitat and a Service-approved biologist would survey for and relocate all tidewater gobies at risk of immediate harm to suitable sites. We expect these measures to minimize disturbances to breeding activity. The successful increase of flood carrying capacity and removal of invasive plants in the Salinas River proposed to result from the Project may increase the availability of breeding habitat in the long term. Therefore, we expect that relatively few breeding tidewater gobies would be affected by the Project and that tidewater goby reproduction in the action area or rangewide would not be appreciably reduced.

### Numbers

We are unable to determine the precise number of tidewater gobies that may be affected by the proposed Project because numbers of individuals in occupied sites vary between breeding and non-breeding seasons and across years. We anticipate that a small proportion of tidewater gobies present at any time may be injured or killed, temporarily reducing their numbers locally. However, because the tidewater goby produces numerous offspring under favorable conditions and the frequency and extent of maintenance activities would diminish over the course of the Project, any losses are likely to be compensated for during subsequent breeding seasons. Project activities may also increase availability of breeding habitat and thus numbers in the long term. Thus we anticipate that the proposed action would not substantially reduce the species' numbers locally or rangewide in the short term, and may increase numbers in the long term pending the success of maintenance activities in improving ecological conditions in the lower Salinas River.

### Distribution

The proposed Project could result in the direct loss of a proportion of any tidewater gobies currently present in the Salinas River Lagoon and lower Salinas River and indirectly reduce their reproductive capacity through temporary loss and degradation of habitat. Complete loss of the local population within recovery Sub-Unit GB-11 would significantly reduce the distribution of the species locally, as tidewater gobies had been presumed extirpated from the Salinas River estuary until gobies were detected here in 2013 and again in 2014. However, the proposed maintenance activities are expected to result in the loss of only a small proportion at most of any tidewater gobies present at any given time during the course of the Project. Thus the Project would not appreciably reduce the distribution of the tidewater goby within the Greater Bay Area recovery unit or at a range-wide level, and may help increase the stability of the local population by increasing the availability of suitable habitat and reducing the frequency of flooding events requiring manual breaching of the Salinas River Lagoon.

### Recovery

We do not anticipate that the proposed action would substantially affect conservation of the tidewater goby in the Greater Bay Area Recovery Unit or the long-term survival and recovery of the species. The lower Salinas River including its lagoon was identified in the 2005 recovery plan as a potential reintroduction site within recovery Sub-Unit GB-11, thus the observation of tidewater gobies in the Salinas River Lagoon in 2013 represents a significant milestone in the species' recovery. The recovery plan emphasizes the importance of conserving population units and metapopulation dynamics. While there could be negative effects to some individual tidewater gobies and to goby habitat in the short term, these should be minimal and temporary with implementation of the proposed conservation measures. Project activities are designed to promote expansion of native riparian and aquatic habitats, create low velocity side channels, and reduce the frequency of flooding events, which together may improve the availability and stability of tidewater goby habitat in the Salinas River estuary. Surveys and habitat assessments would provide information valuable to recovery efforts in Sub-Unit GB-11. Thus we expect no long-term negative effects to the local population or metapopulation of the tidewater goby and the Project may contribute to the species' recovery in the long term.

### Conclusion for the tidewater goby

After reviewing the current status of the tidewater goby, the environmental baseline for the action area, the effects of the proposed Salinas River Stream Maintenance Program and the cumulative effects, it is the Service's biological opinion that the Salinas River Stream Maintenance Program, as proposed, is not likely to jeopardize the continued existence of the tidewater goby, because:

1. The project would not appreciably reduce reproduction of the species either locally or rangewide;
2. The project would affect a small proportion of the individuals present, and thus would not appreciably reduce tidewater goby numbers at the local level or rangewide;
3. The project would not reduce the species' distribution either locally or rangewide;
4. The project would not cause any effects that would preclude our ability to recover the species, and could provide useful data relevant to its recovery;
5. Project activities may increase the quantity and quality of suitable habitat for tidewater gobies in the long term, and contribute positively to their overall recovery.

### **Tidewater goby critical habitat**

#### Conclusion for tidewater goby critical habitat

After reviewing the current status of the critical habitat of the tidewater goby, the environmental baseline of critical habitat for the action area, the effects of the proposed Salinas River Stream Maintenance Program on critical habitat, and the cumulative effects, it is the Service's biological opinion that the Salinas River Stream Maintenance Program, as proposed, is not likely to result

in the destruction or adverse modification of critical habitat of the tidewater goby, because:

1. The project would have small and temporary effects on the primary constituent elements in critical habitat Unit MN-2; and
2. The overall function and conservation value of critical habitat would not be appreciably reduced.

### **California red-legged frog**

#### Reproduction

California red-legged frogs have not been reported to breed in the action area, but the proposed Project may temporarily reduce the availability of any breeding habitat available locally. Maintenance activities may harm some California red-legged frogs, eggs and larvae if present. Any loss of breeding habitat is expected to be temporary and would represent a small portion of that available rangewide. Conservation measures would limit direct and indirect effects to breeding habitat and a Service-approved biologist would survey for and relocate California red-legged frogs at risk of harm to suitable sites. We expect these measures to minimize disturbances to breeding activity if any occurs. The proposed creation of side channels and associated riparian habitat in the Salinas River may increase the availability of breeding habitat in the long term. Therefore, we expect that relatively few California red-legged frogs would be affected by the Project and that the species' reproduction in the action area or rangewide would not be appreciably reduced.

#### Numbers

We expect that a small number of California red-legged frogs may be injured or killed as a result of maintenance activities and capture and relocation efforts, temporarily reducing their numbers locally, and that the amount of available habitat may temporarily decrease. Though prior records are limited, the California red-legged frog is known to occur within and near to downstream portions of the action area and may occur during Project activities. However, the temporary nature of most Project impacts, avoidance of the wet season for most activities, and the proposed conservation measures will minimize the number of California red-legged frogs lost. Project activities may increase the availability of breeding habitat, and thus numbers, in the long term. Thus we anticipate that the proposed action would not substantially reduce the species' numbers locally or rangewide in the short term, and may increase numbers in the long term the proposed maintenance activities increase habitat suitability for California red-legged frogs along the Salinas River.

#### Distribution

The proposed Project could result in the direct loss of some California red-legged frogs and indirectly reduce their reproductive capacity through temporary loss and degradation of habitat.

Maintenance activities may indirectly impact aquatic breeding and non-breeding habitat and directly impact upland and dispersal habitat, but most impacts would be temporary and disturbed areas would likely return to their previous condition, or would become more suitable as nonnative plants are replaced by natives and side channels provide areas of slower moving water. The Project would affect a small proportion of the California red-legged frog habitat available in the action area and a very small proportion of that available in the species' geographic range. Also, the Corps and applicant have proposed conservation measures to minimize the risk of adverse effects on individuals and would conduct most work in the dry season. Thus the Project would not appreciably reduce the distribution of the California red-legged frog at the local or range-wide level, and may increase the extent of local populations by increasing suitable habitat and promoting more natural hydrologic conditions along the Salinas River.

### Recovery

We do not anticipate that the proposed action would substantially affect conservation and recovery of the California red-legged frog in the Diablo Range and Salinas Valley or Central Coast Recovery Units, or within the Watsonville Slough-Elkhorn Slough Core Recovery Area. While there could be negative effects to individual California red-legged frogs and to their habitat in the short term, these should be minimal and temporary with implementation of the proposed conservation measures and timing of Project activities. The proposed Project would not increase the threats currently impacting the California red-legged frog in these recovery units or core recovery area, would result in no appreciable change in reproduction, population numbers and distribution, and would not preclude the Service's ability to implement any of the measures identified in the recovery plan for the species. Project activities may promote expansion of suitable riparian and aquatic habitats for California red-legged frogs in the long term, and pre-activity surveys would provide information valuable to recovery efforts. Thus we conclude that the proposed Project would not appreciably reduce the likelihood of recovery of the California red-legged frog, and may contribute positively to its recovery in the long-term.

### Conclusion for the California red-legged frog

After reviewing the current status of the California red-legged frog, the environmental baseline for the action area, the effects of the proposed Salinas River Stream Maintenance Program and the cumulative effects, it is the Service's biological opinion that the Salinas River Stream Maintenance Program, as proposed, is not likely to jeopardize the continued existence of the California red-legged frog, because:

1. The Project would not appreciably reduce reproduction of the species either locally or rangewide;
2. The Project would affect a very small number of individuals, and would not appreciably reduce numbers of the California red-legged frog at the local level or rangewide;
3. The Project would not reduce the species' distribution either locally or rangewide; and
4. The Project would not cause any effects that would preclude our ability to recover the species.

## 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 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.

### **Least Bell's vireo**

We anticipate that some least Bell's vireos could be taken as a result of the proposed action. For activities conducted during the nesting season, we expect the incidental take to be in the form of loss of nests and young from nonnative vegetation treatment and mitigation planting activities, and harassment and harm from indirect effects associated with noise, vibration, and visual disturbance from maintenance activities and attraction of nest predators and cowbirds to the construction site. Adults and juveniles could also experience increased predation risk if disturbed by work activities and displaced from the action area into unfamiliar habitat. Vegetation removal conducted outside of the breeding season may also harm least Bell's vireos by reducing or degrading breeding habitat, causing returning adults to look for more suitable habitat and exposing them to increased predation and other risks.

We cannot quantify the precise number of least Bell's vireos that may be taken as a result of the Corps' proposed action because least Bell's vireos move over time; for example, animals may enter or leave the action area after the time of pre-construction surveys. Least Bell's vireos may

be difficult to detect due to their preference for dense riparian habitat, and death or injury of individuals displaced to areas outside of the action area would be difficult to observe. Finding a dead or injured least Bell's vireo may also be unlikely due to their small size, potentially large territory, and the likelihood that dead individuals would be quickly scavenged. The protective measures proposed by the Corps and applicant are likely to prevent mortality or injury of most individuals.

Consequently, we are unable to reasonably anticipate the actual number of least Bell's vireos 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 we expect few, if any, least Bell's vireos to be observed in the action area, and that adverse effects to the species would likely be low given the nature of the proposed activities. Therefore, we anticipate that take of least Bell's vireos would also be low.

Therefore, if 1 is found dead or injured, the Corps must contact our office immediately to reinitiate formal consultation. If an active nest is detected over the 10-year Project term, the Corps must contact our office immediately so we can review the Project activities to determine if additional protective measures are needed. 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.

#### **Tidewater goby**

We anticipate that some tidewater gobies could be taken as a result of the proposed action. We expect the incidental take to be in the form of harm, capture, injury, and mortality. Tidewater gobies may also be subject to harm if unexpected changes in Salinas River hydrology or sediment mobilization increase sediment transport into downstream areas or require changes in the breaching regime of the Salinas River Lagoon. Sediment release could affect occupied habitats and smother burrows, while breaching could reduce habitat quality and quantity or cause gobies to be flushed out of the lagoon or stranded. Tidewater gobies may also be injured or killed by herbicides, chemical spills, and degraded water quality from project materials or activities. We cannot quantify the precise number of tidewater gobies that may be taken as a result of the Corps' proposed action because tidewater gobies are a mobile species in their aquatic environment and may enter or depart the action area since the time of the last surveys. Other individuals may not be detected due to their cryptic nature and small size. The measures proposed by the Corps and MCWRA and avoidance of aquatic habitats are intended to minimize injury and mortality of most individuals. In addition, finding dead or injured tidewater gobies is unlikely.

While we are unable to reasonably anticipate the actual number of tidewater gobies that would be taken by the proposed action, 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 low given the

nature of the proposed activities and protective measures, 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.

The considerations we used in arriving at the take we anticipate include: (1) tidewater goby populations fluctuate greatly in number of individuals; (2) dead or injured individuals are difficult to detect; (3) some tidewater gobies may be killed or injured by chemicals, spills, erosion, degraded water quality from project materials or activities; (4) because the number of tidewater gobies in a population may be high, many individuals could be taken without a substantial effect on the population; (6) minimization measures proposed by the Corps should be effective at minimizing adverse effects to tidewater gobies; and (7) the level of take we anticipate must be consistent with a non-jeopardy determination, in that it cannot appreciably reduce the numbers, reproduction, or distribution of the species. For take due to capture, we anticipate that all tidewater gobies encountered within work areas will be captured, and that some injury or mortality will occur as a result of unpredictable circumstances. Because we are unable to reasonably anticipate the actual number of tidewater gobies that would be captured, we are using injury or mortality during capture as a measure of the take we anticipate, as described above.

Based on the proposed project activities, the assumption that tidewater gobies occur within the action area, the limited number of recent surveys of the Salinas River Lagoon where tidewater gobies were detected, and the uncertainty of how many tidewater gobies would be captured and moved out of harm's way, we have determined that if more than 25 tidewater gobies are found dead or injured or more than 10 percent of the tidewater gobies captured and relocated die, the Corps must contact our office immediately to reinstate 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 the proposed action. We expect the incidental take to be in the form of capture during relocation activities, and in the form of harassment, harm, injury, or death as a result of maintenance activities if they are accidentally injured or killed during capture and relocation or are unable to be collected for relocation and remain in active construction areas. The probability of these risks may be increased if substantial rainfall (greater than 0.5 inch of rain in a 24-hour period) occurs and California red-legged frogs are dispersing through the area during work activities, though most activities would occur outside of the rainy season. California red-legged frogs could also be killed or wounded by predators if they abandon habitat within or adjacent to work areas and be subject to desiccation if they leave shelter sites.

We cannot quantify the precise number of California red-legged frogs that may be taken as a result of the Corp's proposed action because the species moves over time; for example, animals may enter or leave the action area after the time of pre-activity surveys. California red-legged frogs may be difficult to detect due to their small body size and use of aquatic habitats, underground burrows, or dense cover. Animals injured or killed during translocation efforts are likely to be observed; however, mortality from other sources, including the indirect effects of translocation (e.g., unable to find food in a new location) or displacement from the action area, would be difficult to observe. Finding a dead or injured California red-legged frog may also be unlikely due to their cryptic coloration and potential to be quickly scavenged. The protective measures proposed by the Corps and MCWRA are likely to prevent mortality or injury of most individuals.

Consequently, we are unable to reasonably anticipate the actual number of 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 we expect some California red-legged frogs to be observed in downstream portions of the action area (RMUs 6 and 8), but that adverse effects to the species would likely be low given the nature of the proposed activities and conservation measures. Therefore, we anticipate that take of California red-legged frogs would also be low. We also recognize that for every 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 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 previously believed). 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.

Therefore, if 2 adult or 2 juvenile California red-legged frogs are found dead or injured, the Corps must contact our office immediately to reinitiate formal consultation. If 10 adult or 10 juvenile California red-legged frogs are captured and relocated, the Corps must contact our office immediately so we can review the Project activities to determine if additional protective measures are needed. Also, if any other life stages of the California red-legged frog are identified in the action area that are completely dependent on water (i.e. egg masses or tadpoles), the Corps must contact our office immediately so we can review the Project activities to determine if additional protective measures are needed. 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 measures described below are non-discretionary, and must be undertaken by the Corps or made binding conditions of any grant or permit issued to MCWRA, 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 MCWRA to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit, contract or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the Corps or MCWRA 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, tidewater gobies, and California red-legged frogs:

1. Biologists must be authorized by the Service before they survey for least Bell's vireos, tidewater gobies, and California red-legged frogs, and before they capture and move tidewater gobies and California red-legged frogs in the action area.
2. Effects to the least Bell's vireo, tidewater goby, and California red-legged frog must be minimized in the action area.

#### 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.

1. The following term and condition implements reasonable and prudent measure 1:

The Corps and MCWRA must request our approval of any biologists that they or their contractors employ to conduct project activities associated with the least Bell's vireo, tidewater goby, and California red-legged frog pursuant to this biological opinion. Such requests must be in writing, and be received by the Ventura Fish and Wildlife Office at least 30 days prior to any such activities being conducted. Please be advised that possession of a 10(a)(1)(A) permit for the covered species does not substitute for the implementation of this measure. Authorization of Service-approved biologists is valid for this project only.

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

Prior to the onset of any Project related activities, the Service-approved biologist must identify appropriate locations to receive tidewater gobies and California red-legged frogs from the Project area in the event that any need to be relocated. These locations must be in proximity to the Project site, contain suitable habitat for the respective species, not be affected by project activities, and be free of exotic predatory species (i.e., bullfrogs, crayfish) to the best of the approved biologist's knowledge.

### REPORTING REQUIREMENTS

Pursuant to 50 CFR 402.14(i)(3), the Corps must report the progress of the action, including compliance with the above measures and the impact of the action on the species, to the Service as specified in this incidental take statement to the Service's Ventura Fish and Wildlife Office (2493 Portola Road, Suite B, Ventura, California 93003) within 60 days following completion of the proposed 10- year Project. The Corps has indicated that MCWRA and parties contracted by the applicant may prepare and submit the final report to the Corps and the Service documenting compliance with the above measures and reporting all impacts to the species. The report must describe all activities that were conducted under this biological opinion, including activities and conservation measures that were described in the proposed action and required under the terms and conditions, and discuss any problems that were encountered in implementing conservation measures or terms and conditions and any other pertinent information. The report must also include the following information:

An annual report must be prepared by MCWRA and RCDMC and made available to the Service for review after March 31 of each year of maintenance. The annual report will document the maintenance and mitigation actions conducted for the year, all observations of listed species including time, date, location (including a map), and a description of the animal and any take, and the implementation of conservation measures for listed species including an explanation of why any measures were not fully implemented, if applicable. Within six months upon completion of the project, a comprehensive report must be provided to the Service that includes all information from the annual reports.

The Service recognizes that MCWRA and other parties may author the reports described above. However, the Corps must review all reports to ensure compliance with the requirements of this biological opinion prior to submitting them to the Service.

Upon completion of the project, the Corps must report all observations of federally listed species to CDFW for inclusion in the CNDDDB.

### 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 least Bell's vireo, tidewater goby, 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 and MCWRA 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 and MCWRA must transport injured animals to a qualified veterinarian. Should any treated least Bell's vireos, tidewater gobies or California red-legged frogs survive, the Corps or MCWRA must contact the Service regarding the final disposition of the animal(s).

Any least Bell's vireos found dead must be provided to the Western Foundation of Vertebrate Zoology; Contact: Rene Corado, Collections Manager, Western Foundation of Vertebrate Zoology, 439 Calle San Pablo, Camarillo, CA 93012, (805) 388-9944. Any tidewater gobies found dead should be preserved in a solution of at least 80 percent ethanol for possible genetic analysis and the Service should be contacted to determine the appropriate disposition location. We recommend that dead California red-legged frogs identified in the action area be tested for amphibian disease; however, this recommendation is discretionary and to be determined by the Corps upon contacting the Ventura Fish and Wildlife Office at the discovery of a dead California red-legged frog. If the Corps chooses not to submit dead California red-legged frogs for testing, they must be placed with the California Academy of Sciences; Contact: Jens Vindum, Collections Manager, California Academy of Sciences Herpetology Department, Golden Gate Park, San Francisco, California, 94118, (415) 750-7037.

### 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.

1. We recommend that the Corps advise Service-approved biologist(s) to relocate other native reptiles or amphibians found within work areas to suitable habitat outside of Project areas if such actions are in compliance with State laws.
2. We recommend that dead California red-legged frogs identified in the action area be tested for amphibian disease.
3. We recommend that the Corps advise Service-approved biologist(s) to remove non-native aquatic animals such as bullfrogs and crayfish which may prey on tidewater gobies and California red-legged frogs and other native amphibians whenever these are detected during surveys.

4. The Recovery Plan for the tidewater goby identifies the lower Salinas River as a reintroduction site, and lists the amount of habitat restoration needed here as high due to impacts from sedimentation, pesticide and nutrient runoff, and poor water quality. The Corps and MCWRA in cooperation with NMFS should integrate a monitoring program for tidewater goby into ongoing studies and management of the lower Salinas River, and coordinate with partner agencies and local landowners to address restoration needs.
5. The Recovery Plan for the California red-legged frog identifies conservation goals for the Watsonville Slough-Elkhorn Slough Core Recovery Area including reducing impacts of agriculture, improving water quality, and reducing impacts of urbanization. The Corps and MCWRA should coordinate with partner agencies and local landowners to promote these goals.

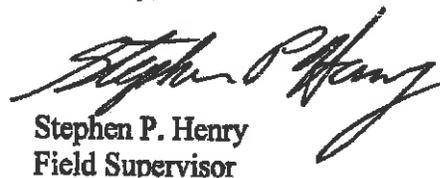
The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats.

#### REINITIATION NOTICE

This concludes formal consultation on the actions outlined in the request for formal consultation. 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 Corp's action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the Corps' 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 Mark Ogonowski of my staff at (805) 644-1766 ext. 370, or by electronic mail at [mark\\_ogonowski@fws.gov](mailto:mark_ogonowski@fws.gov).

Sincerely,



Stephen P. Henry  
Field Supervisor

## LITERATURE CITED

- [AOU] American Ornithologists' Union. 1998. Checklist of North American birds, seventh edition. American Ornithologists' Union, Washington D.C.
- Barlow, J. 1962. Natural history of the Bell's vireo, *Vireo bellii*. University of Kansas Publication 12: 241-296.
- Beck, P. 1996. Song repertoire in the least Bell's vireo, *Vireo bellii pusillus*: relationships between repertoire size and breeding ecology. M.S. Thesis, San Diego State University. viii + 94 pp.
- Brown, B. 1993. Bell's vireo. In: A. Poole, P. Stettenheim, and F. Gill (eds.), The birds of North America, No. 35. Philadelphia: The Academy of Natural Sciences; Washington D.C.: The American Ornithologists' Union.
- Bulger, J.B., N.J. Scott, and R.B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frogs (*Rana aurora draytonii*) in coastal forests and grasslands. Biological Conservation 110:85-95.
- [CNDDB] California Department of Fish and Wildlife, Natural Diversity Database. 2016. Element occurrence reports for California red-legged frog, California tiger salamander, least Bell's vireo, Monterey spineflower, San Joaquin kit fox, tidewater goby, and yellow-billed cuckoo.
- [Cal-IPC] California Invasive Plant Council. 2011. *Arundo donax* distribution and impact report. Agreement no. 06-374-559-0, prepared for State Water Resources Control Board. <http://www.cal-ipc.org/ip/mapping/Arundo/index.php>.
- [CCRWQCB] Central Coast Regional Water Quality Control Board. 2014. Total maximum daily loads for nitrogen compounds and orthophosphate in streams of the lower Salinas River and Reclamation Canal basin and the Moro Cojo Slough subwatershed. Fact sheet #2. Approved and effective as of May 7, 2014.
- Chace, J. F., J. J. Walsh, A. Cruz, J. W. Prather, and H. M. Swanson. 2002. Spatial and temporal activity patterns of the brood parasitic brown-headed cowbird at an urban/wildland interface. Landscape and Urban Planning. 983(2002) 1-12.
- Davidson, C., H.B. Shaffer, and M.R. Jennings. 2001. Declines of the California red-legged frog: climate, UV-B, habitat, and pesticides hypotheses. Ecological Applications 11:464-479.
- Durkin, P. R. and M. Follansbee. 2004. Imazapyr: Human health and ecological risk assessment – final report. Prepared for the USDA Forest Service by Syracuse Environmental

- Research Associates, Inc (GSA Contract#: GS-10F-0082F). 336 pp + Appendices.
- Edington, A.N., Sheridan, P.M., Stephenson, G.R., Thompson, D.G., and Boermans, H.J. 2004. Comparative effects of ph and Vision herbicide on two life stages of four anuran amphibian species. *Environmental Toxicology and Chemistry* 23(4)815-822.
- [EXTOXNET] Extension Toxicology Network. 1996. Glyphosate pesticide information profile. Available at: <http://extoxnet.orst.edu/pips/glyphosa.htm>. Accessed June 17, 2010.
- Ferree, K. 2002. Nest site selection and nest success of yellow warbler, Bell's vireo, and yellow-breasted chat in desert riparian ecosystem. M.S. Thesis, San Diego State University. viii + 57 pp.
- Fisher, J. P., B. Mavros, D. Waller, M. Heller, B. Suedel, B. Gillespie, and J. Siocomb. 2003. Ecological risk assessment of the proposed use of the herbicide imazapyr to control invasive cordgrass (*Spartina spp.*) in estuarine habitat of Washington State. Washington State Department of Agriculture, Entrix, Inc., Olympia, Washington. 160 pp.
- Fox, L., H. Steele, K. Holl, and M. Fusari. 2006. Contrasting demographics and persistence of rare annual plants in highly variable environments. *Plant Ecology*: Volume 183, Number 1, pp. 157-170.
- Franzreb, K. 1989. Ecology and conservation of the endangered least Bell's vireo. Biological report 89(1), U.S. Department of the Interior, U.S. Fish and Wildlife Service, Sacramento, California.
- Garrett, K. and J. Dunn. 1981. Birds of southern California: status and distribution. Los Angeles Audubon Society, California. 408pp.
- Goldwasser, S. 1981. Habitat requirements of the least Bell's vireo. California Department of Fish and Game final report, Job IV-38.1.
- Govindarajulu, P.P. 2008. Literature review of impacts of glyphosate herbicide on amphibians: What risks can the silvicultural use of this herbicide pose for amphibians in B.C.? Wildlife Report No. R-28. British Columbia Ministry of Environment, Victoria, B.C.
- Gray, V. and J. Greaves. 1984. The riparian forest as habitat for the least Bell's vireo. *In*: R. Warner and K. Hendrix (eds.), California riparian systems: ecology, conservation, and productive management. University of California Press, Davis, California.
- Greaves, J. 1987. Least Bell's vireos at the Gibraltar Reservoir in Santa Barbara County, California in 1987. Unpublished report prepared for the Office of Endangered Species, U.S. Fish and Wildlife Service, U.S. Forest Service, and the California Department of Fish and Game.

- Greaves, J. and Z. Labinger. 1997. Site tenacity and dispersal of least Bell's vireos. 1997 Transactions of the Western Section of the Wildlife Society 33:18-23.
- Griffith, J. and J. Griffith. 2000. Cowbird control and the endangered least Bell's vireo: a management success story. *In*: J. Smith, T. Cook, S. Rothstein, S. Robinson, and S. Sealy (eds.), Ecology and management of cowbirds and their hosts. Pp. 342-356. University of Texas Press, Austin, Texas.
- Grinnell, J. and A. Miller. 1944. The distribution of the birds of California. Pacific Coast Avifauna No. 27. Contribution from the Museum of Zoology of the University of California, Berkeley. Reprinted by Artemisia Press, Lee Vining, California, 1986. 617 pp.
- Grishaver, M., P. Mock, and K. Preston. 1998. Breeding behavior of the California gnatcatcher in southwestern San Diego County, California. Western Birds 29:299-322. Hall, L.
2011. Results of 2011 bird surveys on nature conservancy properties along the Santa Clara River, Ventura County, California. Western Foundation of Vertebrate Zoology. Camarillo, California.
- [Hagar & MCWRA] Hagar Environmental Science and Monterey County Water Resources Agency. 2015. Salinas River Lagoon monitoring report 2014. June 2015.
- Halterman, M.D., M.J. Johnson, J.A. Holmes, and S.A. Laymon. 2016. A natural history summary and survey protocol for the western distinct population segment of the yellow-billed cuckoo: U.S. Fish and Wildlife techniques and methods, DRAFT, 45 pp.
- Hamilton, T. 1962. Species relationships and adaptations for sympatry in the avian genus *Vireo*. Condor 64:40-68.
- [HTH] H.T. Harvey and Associates. 2013. Pankey ranch mining and restoration project biological assessment, San Luis Obispo County, California. Prepared for Oasis Associates, Inc. Project #3323-02.
- Hayes, M.P., and M.R. Jennings. 1988. Habitat correlates of distribution of the California red-legged frog (*Rana aurora draytonii*) and the foothill yellow-legged frog (*Rana boylei*): Implications for management. Pages 144-158 in R. Sarzo, K.E. Severson, and D.R. Patton (technical coordinators). Proceedings of the Symposium on the Management of Amphibians, Reptiles, and Small Mammals in North America. USDA Forest Service General Technical Report RM-166.
- Hayes, M.P., and M.R. Tennant. 1985. Diet and feeding behavior of the California red-legged frog *Rana aurora draytonii* (Ranidae). The Southwestern Naturalist 30:601-605.

- Henley, W.F., M.A. Patterson, R.J. Neves, and A. Dennis Lemly. 2000. Effects of Sedimentation and Turbidity on Lotic Food Webs: A Concise Review for Natural Resource Managers. *Reviews in Fisheries Science*. 8(2):125-139.
- Hensley, M. 1950. Notes on the breeding behavior of the Bell's vireo. *Auk* 67:243-244.
- Howe, C.M., Berrill, M., Pauli, B.D., Helbing, C.C., Werry, K., Veldhoen, N. 2004. Toxicity of glyphosate-based pesticides to four North American frog species. *Environmental Toxicology and Chemistry* 23(8):1928-1938.
- Howell, C.A., J.K. Wood, M.D. Dettling, K. Griggs, C.C. Otte, L. Lina, and T. Gardali. 2010. Least Bell's vireo breeding records in the Central Valley following decades of extirpation. *Western North American Naturalist* 70:105-113.
- Irwin, J.F., and D.L. Soltz. 1984. The natural history of the tidewater goby, *Eucyclogobius newberryi*, in the San Antonio and Schuman Creek system, Santa Barbara County, California. U.S. Fish and Wildlife Service, Sacramento Endangered Species Office, California. Contract No. 11310-0215-2.
- Jennings, M.R. 1988. Natural history and decline of native ranids in California. Pages 61–72 in H.F. De Lisle, P.R. Brown, B. Kaufman, and B.M. McGurty, editors. *Southwestern Herpetologists Society special publication number 4: proceedings of the Conference on California Herpetology*. Southwestern Herpetologists Society, Van Nuys, California, USA.
- Jennings, M.R., and M.P. Hayes. 1985. Pre-1900 overharvest of California red-legged frogs (*Rana aurora draytonii*): The inducement for bullfrog (*Rana catesbeiana*) introduction. *Herpetological Review* 31:94-103.
- Jennings, M.R., and M.P. Hayes. 1994. Amphibian and reptile species of special concern in California. Report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. 255 pp.
- Kegley, S. E., Hill, B. R., Orme S., Choi A. H. 2010. PAN pesticide database, Pesticide Action Network, San Francisco, California. Available at: <http://www.pesticideinfo.org>. Accessed June 17, 2010.
- Kus, B. 1999. Impacts of brown-headed cowbird parasitism on productivity of the endangered least Bell's vireo. *Research and management of the brown-headed cowbird in western landscapes*. *Studies in Avian Biology* 18:160-166.
- Kus, B. 2002. Fitness consequences of nest desertion in an endangered host, the least Bell's vireo. *Condor* 104:795-802.

- Kus, B. and P. Beck. 1998. Distribution and abundance of the least Bell's vireo (*Vireo bellii pusillus*) and the southwestern willow flycatcher (*Empidonax traillii extimus*) at selected southern California sites in 1997. Prepared for the California Department of Fish and Game. 76 pp.
- Kus, B. and M. Whitfield. 2005. Parasitism, productivity, and population growth: response of least Bell's vireos (*Vireo bellii pusillus*) and southwestern willow flycatchers (*Empidonax traillii extimus*) to cowbird (*Molothrus* spp.) control. *Ornithological Monographs* 57:16-27.
- Labinger, Z. and J. Greaves. 2001. Summary report of avian studies (1994-1999) following the Arco/Four Corners January 17, 1994 oil spill on the Santa Clara River, California. Draft. Prepared by Bio Logic Consulting for the United States Fish and Wildlife Service, Ventura Field Office, Ventura, California.
- Lajmanovich, R.C., Sandoval, M.T., Peltzer, P.M. 2003. Induction of Mortality and Malformation in *Scinax nasicus* tadpoles exposed to glyphosate formulations. *Bulletin of Environmental Contamination and Toxicology*. 70:612-618.
- Martin, T. and J. Clobert. 1996. Nest predation and avian life-history evolution in Europe versus North America: A possible role of humans? *American Naturalist* 147:1028-1046.
- [MOEEA] Massachusetts State Office of Energy and Environmental Affairs. 2012. Imazapyr: Review for use in lakes and ponds in Massachusetts. January 2012.
- Miner, K. L. 1989. Foraging ecology of the least Bell's vireo, *Vireo bellii pusillus*. M.S. Thesis, San Diego State University. vii + 87 pp.
- Monsanto. 2005. Aquamaster Herbicide Material Safety Data Sheet. Monsanto Company, St. Louis, Missouri.
- [MCWRA] Monterey County Water Resources Agency. 2005. Salinas Valley Water Project flow prescription for steelhead trout in the Salinas River. October 11, 2005.
- [MCWRA] Monterey County Water Resources Agency. 2014a. Salinas River Stream Maintenance program revised final environmental impact report volume 1, June 2014.
- [MCWRA] Monterey County Water Resources Agency. 2014b. Salinas Valley Water Project annual fisheries report for 2013. May 2014.
- [MCWRA] Monterey County Water Resources Agency. 2016a. Biological assessment, Salinas River Stream Maintenance Program, January 2016.
- [MCWRA] Monterey County Water Resources Agency. 2016b. Program Area maps, Salinas

River Stream Maintenance Program. MCWRA Operations and Maintenance Division, January 2016.

[MCWRA] Monterey County Water Resources Agency. 2016c. Additional information for the Salina River Stream Maintenance Program and implementation flow chart. Prepared and distributed July 1, 2016.

[MCWRA & RCDMC] Monterey County Water Resources Agency and Resource Conservation District of Monterey County. 2016. Salinas River Stream Maintenance Program Permit Application Supplemental Attachment, January 2016.

Moyle, P.B. 2002. Inland fishes of California. University of California Press, Berkeley and Los Angeles, California.

Newman, J. 1992. Relationships between territory size, habitat structure, and reproductive success in the least Bell's vireo, *Vireo bellii pusillus*. M.S. Thesis, San Diego State University. vii + 85 pp.

Nolan, V. 1960. Breeding behavior of the Bell's vireo in southern Indiana. *Condor* 62: 225-244.

Peterson, B. 2002. A multi-scale approach to nest predation of the least Bell's vireo (*Vireo bellii pusillus*). M.S. Thesis, San Diego State University. vii + 55 pp.

Peterson, B., B. Kus, and D. Deutschman. 2004. Determining nest predators of the least Bell's vireo through point counts, tracking stations, and video photography. *Journal of Field Ornithology* 75(1):89-95.

Pike, J. and L. Hays. 1992. The status and management of the least Bell's vireo within the Prado Basin, California, 1986-1991. Unpublished report, California State University, Long Beach Foundation and U.S. Fish and Wildlife Service, Laguna Niguel, California.

Pike, J., D. Pellegrini, L. Hays, and R. Zembal. 2004. Least Bell's vireos and southwestern willow flycatchers in Prado Basin of the Santa Ana River watershed, CA. Orange County Water District and U.S. Fish and Wildlife Service, Carlsbad, CA.

Pitelka, F. and E. Koestner. 1942. Breeding behavior of the Bell's Vireo in Illinois. *Wilson Bulletin* 54:97-106.

Rathbun, G.B., M.R. Jennings, T.G. Murphey, and N.R. Siepel. 1993. Status and ecology of sensitive aquatic vertebrates in lower San Simeon and Pico Creek, San Luis Obispo County, California. Final Report under Cooperative Agreement 14-16-0009-91-1909 between U.S. Fish and Wildlife Service and California Department of Parks and

Recreation. Publication Number PB93-230779, National Technical Information Service, Springfield, Virginia.

Rathbun, G.B., and J. Schneider. 2001. Translocation of California red-legged frogs (*Rana aurora draytonii*). *Wildlife Society Bulletin* 29:1300-1303.

RECON (Regional Environmental Consultants). 1989. Comprehensive Species Management Plan for the Least Bell's Vireo. Prepared for the San Diego Area of Governments, San Diego, California.

Salata, L. 1983. Status of the least Bell's vireo on Camp Pendleton, California. Unpublished report prepared for U.S. Fish and Wildlife Service, Laguna Niguel, California. Contract No. 11100-0145-82. January 1983.

Scherzinger, W. 1979. On the relations of predators of hazel grouse (*Bonasa bonasa*). *Vogelwelt* 100:205-217. English translation; abstract.

Scott, N. 2002. Annual report, California red-legged frog, *Rana aurora draytonii*, Permit TE-036501-4. Unpublished report submitted to the Ventura Fish and Wildlife Office.

[SBC] Seay Biological Consulting. 2007. Revised biological assessment, 4444 Indian Valley Road, San Miguel, CA. Prepared for Sierra Delta Corporation.

Shaffer, H.B., G.M. Fellers, S. Randall Voss, C. Oliver, and G.B. Pauly. 2004. Species boundaries, phylogeography and conservation genetics of the red-legged frog (*Rana aurora/draytonii*) complex. *Molecular Ecology* 13:2667-2677.

Sharp, B. 2002. Factors influencing the incidence of brood parasitism by brown-headed cowbirds (*Molothrus ater*) of least Bell's vireos (*Vireo bellii pusillus*). M.S. Thesis, San Diego State University. viii + 58 pp.

Small, M. and M. Hunter. 1988. Forest fragmentation and avian nest predation in forested landscapes. *Journal of Wildlife Management* 52:123-126.

Stebbins, R.C. 2003. A field guide to western reptiles and amphibians, third edition. Houghton Mifflin Company, Boston, Massachusetts. xiii + 533 pp.

Storer, T.I. 1925. A synopsis of the amphibia of California. University of California Publications in Zoology 27:1-342.

Swenson, R.O. 1995. The reproductive behavior and ecology of the tidewater goby *Eucyclogobius newberryi* (Pisces: Gobiidae). Ph.D. dissertation, University of California at Berkeley.

- Swift, C.C., P. Duangsitti, C. Clemente, K. Hasserd and L. Valle. 1997. Biology and distribution of the tidewater goby, *Eucyclogobius newberryi*, on Vandenberg Air Force Base, Santa Barbara County, California. Final report for U.S. National Biological Service Cooperative Agreement No. 1445-0007-94-8129.
- Swift, C.C., J.L. Nelson, C. Maslow, and T. Stein. 1989. Biology and distribution of the tidewater goby, *Eucyclogobius newberryi* (Pisces: Gobiidae) of California. Natural History Museum of Los Angeles County, No. 404.
- [TNC] The Nature Conservancy. 1997. Status and distribution of the least Bell's vireo and southwestern willow flycatcher in the Prado Basin, California, 1986-1997. Unpublished report prepared for the Orange County Water District, County of Orange, California Department of Fish and Game, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service.
- [TNC] The Nature Conservancy. 2004. Weed control methods handbook. <http://tncweeds.ucdavis.edu>
- [Corps] U.S. Army Corps of Engineers. 2016. Letter to the Ventura Fish and Wildlife Office requesting initiation of informal consultation for permitting of the Salinas River Stream Maintenance Program pursuant to the Endangered Species Act of 1973. Subject file no. 22309S. March 31, 2016.
- [EPA] U. S. Environmental Protection Agency. 2000. Pesticide ecotoxicity database. Office of Pesticide Programs: <http://www.ipmcenters.org/ecotox/DataAccess.cfm>; Last accessed April 6, 2012.
- [EPA] U.S. Environmental Protection Agency. 2007. ECOTOX user guide: ECOTOXicology Database System. Version 4.0: <http://www.epa.gov/ecotox>; accessed April 6, 2012.
- [Service] U.S. Fish and Wildlife Service. 1986. Endangered and threatened wildlife and plants; Determination of endangered status for the least Bell's vireo; final rule. Federal Register 51:16474-16481.
- [Service] U.S. Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants; Designation of critical habitat for the least Bell's vireo; final rule. Federal Register 59:4845-4867.
- [Service] U.S. Fish and Wildlife Service. 1996. Determination of threatened status for the California red-legged frog. Federal Register 61:25813-25833.
- [Service] U.S. Fish and Wildlife Service. 1998a. Seven coastal plants and the Myrtle's silverspot butterfly recovery plan. Region 1. Portland, Oregon.

- [Service] U.S. Fish and Wildlife Service. 1998b. Draft recovery plan for the least Bell's vireo (*Vireo bellii pusillus*). Region 1. Portland, Oregon.
- [Service] U.S. Fish and Wildlife Service. 1999. San Joaquin kit fox survey protocol for the northern range. Sacramento, California.
- [Service] U.S. Fish and Wildlife Service. 2001. Least Bell's vireo survey guidelines. Carlsbad, California.
- [Service] U.S. Fish and Wildlife Service. 2002. Recovery plan for the California red-legged frog (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon. viii + 173 pp.
- [Service] U.S. Fish and Wildlife Service. 2005. Recovery plan for the tidewater goby (*Eucyclogobius newberryi*). Portland, Oregon. December 2005.
- [Service] U.S. Fish and Wildlife Service. 2006. Least Bell's vireo (*Vireo bellii pusillus*). 5-year review: Summary and evaluation. Carlsbad, California.
- [Service] U.S. Fish and Wildlife Service. 2007. 5-Year Review for the tidewater goby. U.S. Fish and Wildlife Service, Ventura, California. September 2007.
- [Service] U.S. Fish and Wildlife Service. 2008. Endangered and threatened wildlife and plants; Designation of critical habitat for the Monterey spineflower (*Chorizanthe pungens* var. *pungens*); final rule. Federal Register 73:1525-1554.
- [Service] U.S. Fish and Wildlife Service. 2009. Monterey spineflower (*Chorizanthe pungens* var. *pungens*) 5-year review: Summary and evaluation. U.S. Fish and Wildlife Service, Ventura, California. January 2009.
- [Service] U.S. Fish and Wildlife Service. 2010. Endangered and threatened wildlife and plants; Revised designation of critical habitat for the California red-legged frog; final rule. Federal Register 75:12816-12959.
- [Service] U.S. Fish and Wildlife Service. 2011. Standardized recommendations for the protection of the endangered San Joaquin kit fox prior to or during ground disturbance. Sacramento, California.
- [Service] U.S. Fish and Wildlife Service. 2012. Biological opinion for the City of El Paso de Robles Wastewater Treatment Plant Upgrade Project, Salinas River, San Luis Obispo County, California (8-8-12-F-45).
- [Service] U.S. Fish and Wildlife Service. 2013. Endangered and threatened wildlife and plants; Designation of critical habitat for tidewater goby; final rule. Federal Register 78:8746-

8819.

- [Service] U.S. Fish and Wildlife Service. 2014. Salinas River Multi-Benefit Demonstration Project informal consultation, Monterey County, California.
- [USGS] U.S. Geological Survey. 2002. Least Bell's vireo distribution and abundance in 2001: summary. Unpublished data available from the USGS Western Ecological Research Center, San Diego Field Station, San Diego, California. Compiled November 22, 2002.
- Wang, J.C.S. 1982. Early life history and protection of the tidewater goby, *Eucyclogobius newberryi* (Girard), in the Rodeo Lagoon of the Golden Gate National Recreation Area. Cooperative National Park Research Study Unit, Technical Report 7, Institute of Ecology, University of California, Davis, CPSU/UCD 022/3.
- Whitcomb, R., C. Robbins, J. Lynch, B. Whitcomb, M. Klimkiewicz, and D. Bystrak. 1981. Effects of forest fragmentation on avifauna of the eastern deciduous forest. In R. Burgess and D. Sharpe (eds.), *Forest island dynamics in man-dominated landscapes*. Springer-Verlag, New York, New York.
- White, A. J. 2007. Recommended protection measures for pesticide applications in Region 2 of the U.S. Fish and Wildlife Service. U.S. Fish and Wildlife Service, Environmental Contaminants Program, Austin, Texas.
- Wilbur, S. 1980. The least Bell's vireo in Baja California, Mexico. *Western Birds* 11:129-133.
- Worcester, K.R. 1992. Habitat utilization in a central California coastal lagoon by the tidewater goby (*Eucyclogobius newberryi*). Master of Science thesis, California Polytechnic State University, San Luis Obispo, California.
- Yahner, R. and C. DeLong. 1992. Avian predation and parasitism on artificial nests and eggs in two fragmented landscapes. *Wilson Bulletin* 104:162-168.
- Yahnke, A.E., C.E. Grue, M.P. Hayes, and A.T. Troiano. 2013. Effects of the herbicide imazapyr on juvenile Oregon spotted frogs. *Environmental Toxicology and Chemistry* Vol. 32:228-235.
- Zemal, R., K. Kramer, and R. Bransfield. 1985. Survey of vegetation and vertebrate fauna in the Prado Basin and the Santa Ana River Canyon, California. Unpublished report, U.S. Fish and Wildlife Service. Laguna Niguel, California.

**PERSONAL COMMUNICATIONS**

**Bruce Delgado, U.S. Bureau of Land Management, May 4, 2011.**

**Bart Kowalski, Chenega Support Services, Ford Ord Base Realignment and Closure Division,  
May 16, 2016.**

APPENDIX A. The Declining Amphibian Populations Task Force Fieldwork Code of Practice

**The Declining Amphibian Populations Task Force Fieldwork Code of Practice**

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

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

---

<sup>3</sup> Do not use latex gloves as latex is toxic to amphibians.

For further information on this Code, or on the Declining Amphibian Populations Task Force, contact John Wilkinson, Biology Department, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK, e-mail: [DAPTF@open.ac.uk](mailto:DAPTF@open.ac.uk).



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE

West Coast Region  
777 Sonoma Avenue, Room 325  
Santa Rosa, California 95404

September 6, 2016

Refer to NMFS No: WCR-2016-4711

Holly Costa  
Acting Regulatory Branch Chief  
U.S. Department of the Army  
San Francisco District, Corps of Engineers  
1455 Market Street  
San Francisco, California 94103-1398

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Monterey County Water Resource Agency's Salinas River Stream Maintenance Program (Corps File No. 22309S)

Dear Ms. Costa:

On April 4, 2016, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the U.S. Army Corps of Engineers' (Corps) proposed authorization of the Monterey County Water Resource Agency's (MCWRA) Salinas River Stream Maintenance Program (Program) under Section 404 of the Clean Water Act of 1973 (33 U.S.C. Section 1344) is not likely to adversely affect species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). As described below, the first phase of the proposed Program was authorized by the Corps in 2014. This proposed authorization would include the first phase and expand the Program area (*i.e.*, Phase II). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparations of letters of concurrence.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The concurrence letter will be available through NMFS' Public Consultation Tracking System (<https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts>).<sup>1</sup> A complete record of this consultation is on file at NMFS California Coastal Office, Santa Rosa, California.

#### Proposed Action and Action Area

The following information was obtained from: MCWRA's January 2016 Biological Assessment Salinas River Stream Maintenance Program; Salinas River Multi-Benefit Demonstration Project: Chualar and Gonzales River Management Units Project Description, prepared by The Nature

<sup>1</sup> Once on the PCTS homepage, use the following PCTS tracking number within the Quick Search column: WCR 2016-4711.



Conservancy (The Nature Conservancy 2014); the Corps' March 31, 2016, letter requesting written concurrence; MCWRA's July 1, 2016 *Additional Information for the Salinas River Stream Maintenance Program* (MCWRA 2016a); MCWRA's January 2016 Salinas River Stream Maintenance Program Permit Application Supplemental Attachment (MCWRA 2016b); and, the Corps' June 30, 2016 Public Notice of the proposed Program. NMFS consolidated the information from these sources in describing one project description (NMFS 2016) for the Program.

MCWRA has applied for a 10-year (2016-2025) Corps Regional General Permit (RGP) to oversee the Program and the Corps is requesting consultation on the proposed 10-year Program. The Corps intends to issue a 5-year RGP for the Program with the intent to renew the RGP for another 5 years to cover the remainder of the 10-year term of the Program. The Corps intends to reassess the Program after five years, prior to renewing the Program, and determine in cooperation with NMFS if reinitiation of consultation is necessary. If reinitiation of consultation is deemed necessary, then the Corps would request reinitiation of consultation. If the Corps and NMFS determine reinitiation is not warranted, the Corps would renew the RGP for another five years. MCWRA will review proposed work activities of private landowners, determine whether they comply with the Regional General Permit, and request confirmation from the Corps. As a Program participant, MCWRA will also perform the maintenance activities in the tributaries. MCWRA will also provide Program oversight, monitoring, and submit annual reports.

The Salinas River Multi-Benefit Demonstration Project (Phase I) was permitted by the Corps in 2014 following written concurrence by NMFS (NMFS 2014), and authorized project activities which occurred in 2014 and 2015 in two discrete River Management Units (RMUs). The current proposed Program (Phase II) includes continuation of the previously authorized work in Phase I areas to include five additional RMUs which expands the 2014 action to 55 miles over 92 linear miles of the Salinas River mainstem. The proposed Program also includes approximately two linear miles of the following tributaries: San Lorenzo Creek (1.5 miles), Bryant Canyon Channel (0.15 miles), and Gonzales Slough (70 feet).

The Program proposes to reduce the flood risk of the Salinas River to adjacent farm fields and prevent bank erosion. Proposed activities include native vegetation management (mowing and discing), removal and retreatment of nonnative vegetation (giant reed [*Arundo donax*] and tamarisk [*Tamarix parviflora*]), and sand and sediment grading (e.g., channel smoothing) and removal.

These Program activities would create and maintain a series of linear relic "secondary channels" adjacent to the existing low-flow channel. Program activities will improve higher stream flow access into to the secondary channels, which tie into the low-flow channel from an upstream location and then rejoin the low-flow channel at a downstream location. Work activities in the secondary channels have been designed to avoid the low-flow channel except where the secondary channels join the low-flow channel. Selective treatment areas are also included where physical constraints in channel width require a modified approach as discussed below. The secondary channels and selective treatment areas will be the only maintenance areas in the Salinas River.

The activities described below would occur annually between September 1 and November 15.<sup>2</sup> Best management practices (e.g., no work will be done in the wetted channel; all work will be completed prior to the initiation of winter rains; soil disturbance shall not exceed the minimum area necessary to complete as described in the application; only herbicides approved for use in aquatic and wetland environments that have no impacts on wildlife species will be used for non-native vegetation removal; no fueling of equipment/vehicles will be done in a waterway or immediate floodplain) will be incorporated into all work (MCWRA 2016b). Work activities will occur only within the dry portion of the Salinas River and tributaries.

Pre-maintenance surveys of maintenance areas will be completed no more than 60 days in advance of the commencement of work. These surveys will be used to: set clear, enforceable boundaries for where work will occur; ensure sensitive resources are avoided where possible; and quantify unavoidable resource impacts (i.e., tree removal) in order to identify mitigation needs. These surveys will be conducted under the direction of a qualified biologist with landowners, MCWRA and/or RCDMC personnel, and other technical staff present in the field, as necessary. Project area staking and avoidance flagging will be completed during these surveys. A report will be prepared by the qualified biologist after each survey.

#### Vegetation Management

Program participants will use heavy equipment to mow or disc native vegetation within the secondary channels. Once vegetation is mowed and/or disced, Program participants may smooth the surface of the channel. Though not mandatory, smoothing of the secondary channel surface to homogenize the topography and, if possible, create a slight downstream gradient in the secondary channel, is considered a key component of maintenance. *Arundo* may also be removed.

#### Sediment management

Up to 554,420 cubic yards (cy) of sediment may be removed annually from the Program area. MCWRA will limit the total cumulative extraction in any two consecutive years to no more than 785,000 cy. Additionally, over a consecutive two-year period, no more than 100,000 cy of sediment will be removed from any given one mile length of river in the lower reach (rivermile [RM] 2.0 to RM 22.0) and no more than 450,000 cy will be removed from any given one mile length of river in the upper reach (RM 22.0 to RM 94.0). The annual limit within the tributaries is 2,220 cy. No more than two feet (depth) of sediment will be removed from any given secondary channel, and sediment removal areas will be graded to match adjacent grade. All sediment removed from secondary channels will be placed in demarcated upland areas outside of the active floodplain and above the ordinary high-water mark. Similar to vegetation management activities, sediment removal will not occur within the primary low flow channel, on river banks steeper than 15 percent, or within a 10-foot wide buffer around the low flow channel, depending in site-specific conditions. All sediment removal activities will occur in areas that are dry and more than nine inches above any standing water. For sediment removal activities, landowners and/or growers will be required to

---

<sup>2</sup> Planting of trees to comply with compensatory mitigation requirements may occur year-round, as described in MCWRA 2016b.

obtain necessary and applicable local permits<sup>3</sup> (MCWRA 2016b). Program participants will adhere to sediment removal criteria as described in MCWRA (2016a).

### Selective treatments in RMUs 6 and 7

Because the river is more constrained in these RMUs than the others, portions of these RMUs do not accommodate the secondary channel approach for use throughout the rest of the Program. The river corridor in these constrained RMUs is as narrow as 200 feet between levees and, therefore, the secondary channels could put banks and levees at risk of erosion. The river bed here also contains denser and more continuous cover of vegetation than it did historically (due to reservoir releases in the summer) and the thalweg and adjacent benches contain sediment bars that vary between three and eight feet in height and are often held in place by dense root balls. According to MCWRA (2016b), the combined reduction in cross-sectional area created by these larger bars and the roughness created by dense vegetation exacerbate the already acute flood risk in these reaches.

In two proposed areas within RMUs 6 and 7 (work areas 6.12 and 7.01, respectively), the Program will use a selective treatment approach to provide flood risk reduction while minimizing potential impacts to sensitive habitats and water quality. This approach will use a similar conceptual framework and scientific principles to the secondary channel approach proposed throughout the rest of the Program. Focused disturbance and vegetation removal in and adjacent to the thalweg (*i.e.*, within the 10-foot buffer and the low floodplain benches) will occur, as well as limbing of trees and sand bar ripping/grading to decrease channel roughness and restart natural sediment transport processes. Work area 6.12 is approximately 2.2 miles in length, and work area 7.01 is approximately 0.6 miles in length.

Limited tree removal, limbing of large trees, vegetation mowing in the thalweg and within the 10-foot buffer (but no more than 50 percent of the area may be mowed or disked during an annual maintenance season) sediment management, and bar ripping (limited to 10 bars within work area 6.12 and 8 bars within work area 7.01) will occur in work areas 6.12 and 7.01. A field evaluation and protocol will be implemented in determining areas for bar ripping, as described in MCWRA 2016a.

The action area for this Program includes 94 miles of the Salinas River mainstem beginning at RM 94 and ending at the Salinas River lagoon (the tidally influenced portion of the Salinas River extends from the mouth to approximately three miles upstream of the Highway 1 bridge) and encompasses the entire river channel width from bank to bank within the 55 miles where maintenance activities will occur (between RM2 and RM 94). In these 55 miles, 125 secondary channels and two selective treatments areas are proposed. The Program also includes approximately two linear miles of the following tributaries: San Lorenzo Creek (1.5 miles), Bryant Canyon Channel (0.15 miles), and Gonzales Slough (70 feet). Gonzales Slough enters the Salinas River at RM 31.6, Bryant Canyon Channel at RM 47.1, and San Lorenzo Creek at RM 69. Thus the Program covers 57 river miles where maintenance activity is proposed over the total 94 miles in the Program area.

---

<sup>3</sup> This concurrence letter does not address compliance with the State of California's Surface and Mining Reclamation Act of 1975, nor does it authorize commercial sand mining.

There are no interrelated or interdependent activities associated with the proposed action.

### **Action Agency's Effects Determination**

The Corps determined that the Program is not likely to adversely affect listed species and their critical habitat. The Corps' determination is based on current site conditions, Program activities, and the applicant's proposed minimization measures.

Available information indicates the threatened South-Central California Coast (S-CCC) steelhead (*Oncorhynchus mykiss*) Distinct Population Segment (DPS) (71 FR 834; January 5, 2006) and their designated critical habitat (70 FR 52488; September 2, 2005) may be affected by the proposed Program.

The life history of steelhead is summarized in Busby *et al.* (1996). Steelhead are an anadromous fish, spending some time in both fresh- and saltwater. Steelhead use the Salinas River as a migration corridor. Steelhead smolts pass through the mainstem Salinas River on their downstream migration and adult steelhead pass through during their spawning migration. Smolt and adult migrations generally take place in the winter and spring months. Recent surveys conducted in the Salinas River lagoon documented low numbers of juvenile steelhead rearing in the lagoon (Hagar Environmental Science and MCWRA 2015).

### **Consultation History**

The concept of the Salinas River Multi-Benefit Demonstration Project was initiated in October 2013 by The Nature Conservancy in partnership with MCWRA, landowners and growers. Since that time, NMFS has been involved with the development of the Salinas River Multi-Benefit Demonstration Project, the proposed Program, and participated in numerous site visits. The Salinas River Multi-Benefit Demonstration Project (Phase I) was permitted by the Corps in 2014 following written concurrence by NMFS (NMFS 2014). Documents received from the Corps included photos to illustrate pre-and post-post conditions and monitoring of representative 2015 maintenance areas. Informal consultation on the proposed Program (Phase II) was initiated with NMFS' July 5, 2016 receipt of MCWRA's July 1, 2016 *Additional Information for the Salinas River Stream Maintenance Program*.

## **ENDANGERED SPECIES ACT**

### **Effects of the Action**

Under the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat.

Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The Salinas River flows approximately 180 miles north-northwest from its headwaters in San Luis Obispo County through the Salinas Valley before reaching Monterey Bay near Castroville, California. The tidally influenced portion of the Salinas River extends from the mouth to approximately three miles upstream of the Highway 1 Bridge. The Salinas River within the Program area is roughly divided into two reaches based on channel morphology: the lower reach (RM 2.0 to RM 22.0, which includes RMUs 6 and 7) is generally characterized by a narrower channel (typically approximately 500 to 1,000 feet); and the upper reach (RM 22.0 to RM 94.0, which includes RMUs 1-5) which is relatively wide, with top widths that can exceed 2,000 feet. The channel bed in both reaches is typically either flat with little vertical oscillation in topography, or comprised of low amplitude dune-ripples. The channel bed and banks along both reaches are dominated by sand. RMUs along both reaches consist primarily of private agricultural lands which border or extend into the river channel, but also contain bridges, municipal land and facilities, and other public infrastructure.

There are 57 river miles in the Program area that have maintenance activity proposed out of the total 94 miles in the Program area. The total acreage of vegetation in the Program area is 20,220 acres. In the 55 miles of the Salinas River mainstem, only 4.2 percent of the total vegetation in the Program area will be disturbed. Only 0.08 percent of the total vegetation in the Program Area will comprise the Selective Treatment Areas (channels 6.12 and 7.01). The maximum acres of vegetation that may be impacted over all RMUs is 700.4 acres, 250.7 of which are *Arundo*-dominated. The remaining ~ 450 acres comprise 2.4 percent of the non-*Arundo*-dominated vegetation in the Program area. Ninety-eight percent of the maintenance work proposed in the Program is focused on relic secondary channels with multiple, small (less than 100-foot wide) incursions into the historic streamside buffer along and at the inlet and outlet of the secondary channel.

The effects of the proposed action are reasonably likely to include temporary and minor increases in turbidity and temporal loss of vegetation. However, the Program's proposed work period avoids the co-occurrence of work activities with listed steelhead. Further, by conducting work activities between September 1 and November 15, the Program avoids the migration seasons of steelhead adults and smolts in the Salinas River, and juvenile steelhead will not be present in the mainstem Salinas River due to unsuitable habitat conditions. Thus, NMFS anticipates no listed anadromous salmonids will be present in the Salinas River during work activities, and impacts associated with the Program are expected to be temporary and insignificant.

Work activities will disturb the Salinas River, San Lorenzo Creek, Bryant Canyon Channel, and Gonzales Slough beds and may mobilize sediment resulting in minor and temporary increases in turbidity following the first rains. However, best management practices (e.g., soil disturbance shall not exceed the minimum area necessary to complete the work activity, no equipment will enter the wetted Salinas River) are expected to reduce the likelihood of effects to water quality. Following the first rains, the potential increase in turbidity due to the proposed Program is expected to be considerably less than the levels that would cause behavioral or physical impacts to steelhead. Sediment transport and suspended sediment concentrations have always been high in the Salinas

River (MCWRA 2014). For these reasons, the minor and temporary increase in turbidity as a result of work activities is expected to be insignificant to S-CCC steelhead, including those that may be rearing in the lagoon.

San Lorenzo Creek, Bryant Canyon Channel, and Gonzales Slough do not support steelhead and are not designated critical habitat. The Salinas River is designated critical habitat for S-CCC steelhead. Steelhead use the Salinas River within the Program as a migratory corridor. The designation of critical habitat for S-CCC steelhead uses the term primary constituent elements (PCEs). The new critical habitat regulations (81 FR 7414) replace this term with physical or biological features (PBFs). This shift in terminology does not change the approach used in conducting our analysis, whether the original designation identified primary constituent elements, physical or biological features, or essential features. In this letter of concurrence, we use the term PBF to mean PCE. The PBFs of designated critical habitat for S-CCC steelhead include freshwater migration corridors free of obstruction and excessive predation, with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival. PBFs include sites essential to support one or more life stages of the species. These sites in turn contain physical and biological features that are essential to the conservation of the species.

Work activities include sediment removal and vegetation management which may temporarily affect critical habitat. During work activities, critical habitat may be temporarily affected by potential increases in turbidity. As discussed above, water quality effects in the form of increased turbidity are expected to be temporary and insignificant.

NMFS' *Sediment Removal Guidelines* (NMFS 2004) recommends that proposed extraction plans allow for pass-through of 50 percent of the unimpaired incoming coarse sediment load to maintain downstream habitats. Simply maintaining a positive sediment budget that supplies coarse sediment for downstream habitat may not protect geomorphic resources and habitat at the removal sites. Therefore, NMFS (2004) recommends site-specific habitat, geomorphic features, and physical processes also be protected.

Sediment removal is not expected to result in vertical transitions or elevation blockages between removal areas and upstream and downstream secondary channel areas (MCWRA 2016b). We expect the proposed sediment removal activities will protect migratory habitat for juvenile and adult steelhead habitat, because we do not expect the amount and manner of sediment removed to affect the primary low flow channel (the expected route of migrating steelhead) in terms of channel migration. The average annual sediment load of the Salinas River is 1.57 million cubic yards (MCWRA 2014); the proposed maximum annual removal of 554,420 cubic yards is approximately 35 percent of 1.57 million. If the maximum annual amount of sediment is removed in one year, then only 230,580 cubic yards may be removed the following year; 230,580 cubic yards is approximately 15 percent of 1.57 million. Focused sediment removal activities at the head of bars will mobilize heads of bars which are important to mobilize in order to begin the incremental scour of the bar over several flow periods. Destabilizing the head of the bar reduces the area for continued sediment buildup and expansion of vegetation. The secondary channels are at a higher elevation than the low flow channel and are located sufficiently far enough away from the low flow channel to avoid affecting it. Maintaining at least one foot of elevation above the low flow channel

in the secondary channels and avoiding the primary low flow channel is expected to protect geomorphic features (*i.e.*, sand bars) and physical processes (*i.e.*, low flow channel confinement). Regarding selective treatments in RMUs 6 and 7, total channel length of work areas 6.12 and 7.01 is approximately 2.8 miles (or approximately 3 percent of the Salinas River mainstem within the Program area). Because maintenance activities will occur in only a portion of the selective treatment area which comprise a minor fraction of the low flow channel within the Program area, geomorphic features and physical processes within the Program area will be protected.

Because the secondary channels are located at elevations above those of the low flow channel, work activities are not expected to affect stream flow velocity during base-flow conditions. At higher flows, such as during typical yearly storm events, these secondary channels will begin to activate and convey flow but will remain relatively shallow. During these periods, the secondary channels will have little effect on velocities or depth in the primary low flow channel because they will not convey a significant portion of the flow. Modeling indicates the secondary channels will experience a minor change in velocity, but the velocity in the primary low flow channel will be slightly lower than existing. Such events may cause sand dune formation to occur, but otherwise minimal sediment transport, scour, or erosion is expected (The Nature Conservancy 2014).

The current level of vegetation within the Salinas River channel is thought to be an artifact of summer releases from the reservoirs rather than a natural condition of the river bed. Under historic flow conditions, the lower mainstem of the Salinas River was dry throughout much of the summer and fall months, and would not have water to support the dense vegetation currently present. Under historic conditions, it is also likely there were higher sandbars, deeper pools and during winter months more water in the channel for a longer period of time. Thus, the amount of riparian vegetation may have been less of a concern for steelhead migration. An objective of the proposed Program is to encourage a wider range of riparian habitat conditions spatially over the river floodplain (earlier to later successional vegetation communities) that would have been present historically. Program activities would result in a river corridor closer to recent past (*i.e.*, pre-Salinas Valley Water Project) and historical conditions than currently exist, with a more open thalweg and mix of vegetation types and heights along adjacent and higher benches (MCWRA 2016b). Additionally, the limited tree removal activities over the permit term would retain the majority of the taller habitat currently in 6.12 and 7.01.

In wide river systems, such as the Salinas River, the area of the water surface relative to the volume of water is large, exposing the river to more insolation and more heat gain (Beschta *et al.* 1987). The influence of riparian vegetation on larger rivers, such as the Salinas, is proportionately less than for smaller rivers and tributaries as the shade cast by trees adjacent to the watercourse covers less of the water's surface. This decreases the cooling influence of shade on mainstem waters, particularly those that have higher than normal summer flows because of releases from upstream storage reservoirs.

Due to the work window, existing conditions, and mitigation, we do not expect the proposed removal of vegetation to increase water temperatures, decrease cover, or result in significant delay or interruption of steelhead migration. For these reasons, the potential effects of vegetation removal are expected to be insignificant to S-CCC steelhead and their critical habitat.

Based on the above, the proposed work activities are not expected to degrade PBFs for S-CCC steelhead. The potential effects of this Program are considered insignificant or discountable and are not expected to result in either a net change to existing habitat values or result in adverse impacts to designated critical habitat.

#### **Conclusion**

Based on this analysis, NMFS concurs with the Corps that the proposed action is not likely to adversely affect S-CCC steelhead or their designated critical habitat.

#### **Reinitiation of Consultation**

Reinitiation of consultation is required and shall be requested by the Corps' or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

### **MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT**

Under the MSA, consultation is intended to promote the protection, conservation and enhancement of Essential Fish Habitat (EFH) as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10), and "adverse effect" means any impact which reduces either the quality or quantity of EFH (50 CFR 600.910(a)). Adverse effects may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Pacific Coast Groundfish EFH is present in the Salinas River lagoon. The Corps did not request EFH consultation for the Program, but NMFS has determined the proposed action may result in localized and temporary degradation of water quality. Therefore, NMFS has determined the proposed action would adversely affect EFH for various lifestages of fish species managed under the Pacific Coast Groundfish Fishery Management Plan; however, adverse effects are minimal and localized. Thus, NMFS has no practical EFH Conservation Recommendations to provide.

Please direct questions regarding this letter to William Stevens, North Central Coast Office in Santa Rosa, California at (707) 575-6066, or via e-mail at William.Stevens@noaa.gov.

Sincerely,



William W. Stelle, Jr.  
Regional Administrator

cc: Greg Brown, Corps, San Francisco, California  
Shaunna Juarez, MCWRA, Salinas, California  
Jon Rohrbough, Central Coast Regional Water Quality Control Board, SLO  
Abby Hart, The Nature Conservancy, San Francisco, California  
Copy to ARN File # 151422WCR2014SR00191  
Copy to ARN File # 151422WCR2016SR00206  
Copy to Chron File

#### Literature Cited

- Beschta, R. L., R. E. Bilby, G. W. Brown, L. B. Holtby, and T. D. Hofstra. 1987. Streamside management: forestry and fishery interactions, *in* E. O. Salo, and T. W. Cundy, eds. Seattle.
- Busby, P.J., T.C. Wainwright, G.J. Bryant, L. Lierheimer, R.S. Waples, F.W. Waknitz, and I.V. Lagomarsino. 1996. Status review of West Coast steelhead from Washington, Idaho, Oregon and California. United States Department of Commerce, National Oceanic and Atmospheric Administration Technical Memorandum NMFS-NWFSC-27. 261 pages. [Document available at: [http://www.nwfsc.noaa.gov/assets/25/4245\\_06172004\\_122523\\_steelhead.pdf](http://www.nwfsc.noaa.gov/assets/25/4245_06172004_122523_steelhead.pdf)]
- Hagar Environmental Science and Monterey County Water Resources Agency. 2015. Salinas River Lagoon Monitoring Report. *Prepared for:* Monterey County Water Resources Agency. *Prepared by:* Hagar Environmental Science and Monterey County Water Resources Agency. June 2015. 46 pages.
- Monterey County Water Resources Agency. 2014. Salinas River Stream Maintenance Program Revised Final Environmental Impact Report. SCH#2011041066. Salinas, California. June 2014.
- Monterey County Water Resources Agency. 2016a. Additional information for the Salinas River Stream Maintenance Program. Salinas, California. July 2016.
- Monterey County Water Resources Agency. 2016b. Salinas River Stream Maintenance Program Biological Assessment. Salinas, California. January 2016.

- Monterey County Water Resources Agency. 2016c. Salinas River Stream Maintenance Program Phase I: Chualar and Gonzales River Management Units. Annual Report – 2015 Season. Salinas, California. February 2016.
- NMFS (National Marine Fisheries Service). 2004. Sediment removal from freshwater salmonid habitat: Guidelines to NOAA Fisheries staff for the evaluation of sediment removal actions from California streams. National Marine Fisheries Service, Southwest Region, Long Beach, California. April 19, 2004.
- NMFS (National Marine Fisheries Service). 2007. Biological opinion issued to the U.S. Army Corps of Engineers for the Monterey County Water Resource Agency's Salinas Valley Water Project in Monterey County, California. National Marine Fisheries Service, Southwest Region, Long Beach, California. ARN File # 151422SWR2003SR8711. June 21, 2007.
- NMFS (National Marine Fisheries Service). 2014. Endangered Species Act Section 7(a)(2) Concurrence Letter for the Monterey County Water Resource Agency's Salinas River Multi-Benefit Demonstration Project (Corps File No. 22309S). Issued to U.S. Department of the Army, San Francisco District, Corps of Engineers. National Marine Fisheries Service, West Coast Region, California Coastal Office, Santa Rosa, California. August 29, 2014. 10 pages.
- NMFS (National Marine Fisheries Service). 2016. Memorandum to the file: Consolidated project description. National Marine Fisheries Service, West Coast Region, California Coastal Office, Santa Rosa, California. August 8, 2016, 9 pages.
- The Nature Conservancy. 2014. Salinas River Multi-Benefit Demonstration Project: Chualar and Gonzales River Management Units. Project Description. *Prepared for:* U.S. Army Corps of Engineers, San Francisco, California. May 28, 2014.
- Robins, J. 2014. Salinas River Multi-Benefit Demonstration Project: Chualar and Gonzales River Management Units. Biological Report and Impact Assessment. *Prepared for:* The Nature Conservancy, San Francisco, California. May 19, 2014.



**Central Coast Regional Water Quality Control Board**

August 31, 2016

David E. Chardavoine  
Monterey County Water Resource Agency  
P.O. Box 930  
Salinas, CA 93901  
Email: ChardavoineDE@co.monterey.ca.us

**VIA ELECTRONIC MAIL**

Dear Mr. Chardavoine:

**TECHNICALLY CONDITIONED WATER QUALITY CERTIFICATION NUMBER 32716WQ02 FOR 2016-2025 SALINAS RIVER STREAM MAINTENANCE PROGRAM, MONTEREY COUNTY**

Thank you for the opportunity to review your January 25, 2016 application for water quality certification of the 2016-2025 Salinas River Maintenance Program (Project). The application was completed on February 3, 2016. The Project, if implemented as described in your application and with the additional mitigation and other conditions required by this Clean Water Act Section 401 Water Quality Certification (Certification), appears to be protective of beneficial uses of State waters. We are issuing the enclosed Certification. Should new information come to our attention that indicates a water quality problem, we may require additional monitoring and reporting, issue Waste Discharge Requirements, or take other action.

Your Certification application and submitted documents indicate that Project activities have the potential to affect beneficial uses and water quality. The Central Coast Regional Water Quality Control Board (Central Coast Water Board) issues this Certification to protect water quality and associated beneficial uses from Project activities. We need reports to determine compliance with this Certification. All technical and monitoring reports requested in this Certification, or any time after, are required per Section 13267 of the California Water Code.

Failure to submit reports required by this Certification, or failure to submit a report of technical quality acceptable to the Executive Officer, may subject you to enforcement action per Section 13268 of the California Water Code. The Central Coast Water Board will base enforcement actions on the date of certification. Any person affected by this Central Coast Water Board action may petition the State Water Resources Control Board (State Water Board) to review this action in accordance with California Water Code Section 13320; and Title 23, California Code of Regulations, Sections 2050 and 3867-3869. The State Water Board, Office of Chief Counsel, PO Box 100, Sacramento, CA 95812, must receive the petition within 30 days of the date of this Certification. We will provide upon request copies of the law and regulations applicable to filing petitions.

DR. JEAN-PIERRE WIZET, CHAIR    JOHN M. RICHMOND, EXECUTIVE OFFICER

If you have questions please contact Jon Rohrbough at (805) 549-3458 or via email at Jon.Rohrbough@waterboards.ca.gov, or Phil Hammer at (805) 549-3882. Please mention the above certification number in all future correspondence pertaining to this project.

Sincerely,

**John M. Robertson**

Digitally signed by John M.  
Robertson

Date: 2016.08.31 16:57:43 -07'00'

John M. Robertson  
Executive Officer

Enclosures: Action on Request for CWA Section 401 Water Quality Certification

cc: With enclosures

Elizabeth Krafft  
Monterey County Water Resources Agency  
Email: krafftea@co.monterey.ca.us

Carrie Swanberg  
California Department of Fish and Wildlife  
Email: Carrie.Swanberg@wildlife.ca.gov

Katerina Galacatos  
U.S. Army Corps of Engineers  
Email: Katerina.galacatos@usace.army.mil

401 Program Manager  
State Water Resources Control Board  
Email: Stateboard401@waterboards.ca.gov

Greg Brown  
U.S. Army Corps of Engineers  
Email: Gregory.G.Brown@usace.army.mil

Jennifer Siu  
U.S. Environmental Protection Agency  
Region 9  
Email: siu.jennifer@epa.gov

Bill Stevens  
National Oceanic and Atmospheric Administration  
Email: William.Stevens@noaa.gov

Shea Oades  
Central Coast Water Board  
Email: Shea.Oades@waterboards.ca.gov

Joel Casagrande  
National Oceanic and Atmospheric Administration  
Email: Joel.Casagrande@noaa.gov

Jon Rohrbough  
Central Coast Water Board  
Email: Jon.Rohrbough@waterboards.ca.gov

Linda Connolly  
California Department of Fish and Wildlife  
Email: Linda.Connolly@wildlife.ca.gov

R:\RB3\Shared\401\Certifications\Monterey\2016\32416WQ02\_Salinas River SMP\Board Meeting\Jul 2016\Final agenda items\_2016.07.01\Salinas River SMP staff report July 2016 final\_Att 1 401 Certification.doc

Action on Request for  
Clean Water Act Section 401 Water Quality Certification  
for Discharge of Dredged and/or Fill Materials

---

**PROJECT:** 2016-2025 Salinas River Stream Maintenance Program

**APPLICANT:** David E. Chardavoyne  
Monterey County Water Resources Agency  
P.O. Box 930  
Salinas, CA 93901

**ACTION:**

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

**ATTACHMENTS**

1. Project Information and Conditions
2. Findings

**STANDARD CONDITIONS:**

1. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment per section 13330 of the California Water Code and section 3867 of Title 23 of the California Code of Regulations (23 CCR).
2. This Certification action is not intended to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed per 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license was being sought.
3. The validity of any non-denial Certification action (Actions 1 and 2) is conditioned upon total payment of the fee required under 23 CCR section 3833, unless otherwise stated in writing by the certifying agency.

**ADMINISTRATIVE CONDITIONS:**

1. This Certification is subject to the acquisition of all local, regional, state, and federal permits and approvals as required by law. Failure to meet any conditions contained herein or any conditions contained in any other permit or approval issued by the State of California or any subdivision thereof may result in the revocation of this Certification and civil or criminal liability.
2. In the event of a violation or threatened violation of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of Section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with

the water quality standards and other pertinent requirements incorporated into this Certification.

3. In response to a suspected violation of any condition of this Certification, the Central Coast Water Board may require the holder of any permit or license subject to this Certification to furnish, under penalty of perjury, any technical or monitoring reports the Central Coast Water Board deems appropriate, provided that the burden, including costs, of the reports shall have a reasonable relationship to the need for the reports and the benefits obtained from the reports.
4. In response to any violation of the conditions of this Certification, the Central Coast Water Board may add to or modify the conditions of this Certification as appropriate to ensure compliance.
5. The Central Coast Water Board reserves the right to suspend, cancel, or modify and reissue this Certification, after providing notice to the applicant, if the Central Coast Water Board determines that the Project fails to comply with any of the terms or conditions of this Certification.
6. A copy of this Certification, the application, and supporting documentation must be available at the Project site during construction for review by site personnel and agencies. A copy of this Certification must also be provided to the contractor and all subcontractors who will work at the Project site. All personnel performing work on the proposed Project shall be familiar with the content of this Certification and its posted location on the Project site.
7. The Permittee shall grant Central Coast Water Board staff, or an authorized representative, upon presentation of credentials and other documents as may be required by law, permission to enter the Project site at reasonable times, to ensure compliance with the terms and conditions of this Certification and/or to determine the impacts the Project may have on waters of the State.
8. The Permittee must, at all times, fully comply with the application, plans, specifications, and technical reports submitted to support this Certification; all subsequent submittals required as part of this Certification; and this Certification. The conditions within this Certification and attachment(s) supersede conflicting provisions within applicant submittals.
9. The Permittee shall notify the Central Coast Water Board within 24 hours of any unauthorized discharge to waters of the U.S. and/or State; measures that were implemented to stop and contain the discharge; measures implemented to clean-up the discharge; the volume and type of materials discharged and recovered; and additional BMPs or other measures that will be implemented to prevent future discharges.
10. This Certification is not transferable to any person except after notice to the Executive Officer of the Central Coast Water Board. The Permittee shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new responsible party containing a specific date for the transfer of this Certification's responsibility and coverage between the current responsible party and the new responsible party. This agreement shall include an acknowledgement that the existing responsible party is liable for compliance and violations up to the transfer date and that the new responsible party is liable from the transfer date on.
11. The total fee for this project is \$90,000. The remaining fee payable to the Central Coast Water Board is \$0.

## SPECIAL CONDITIONS

### A. Permit Term

1. This Certification expires on November 30, 2025, except that compensatory mitigation implementation, monitoring, and reporting requirements and conditions of this Certification remain in effect until the Permittee complies with all such requirements and conditions. Central Coast Water Board staff will assess the implementation and effectiveness of the Project after five years, and consider modifications to this Certification for the second five years of the permit term. MCWRA shall not begin maintenance activities in any year unless written approval of the Annual Work Plan has first been obtained from the Central Coast Water Board Executive Officer in accordance with Special Condition E.3. This Certification constitutes approval of the Annual Work Plan for the 2016 maintenance season.

### B. Definitions

1. Low-flow channel. For the purposes of this Certification, "low-flow channel" means the lowest channel in the riverbed, in which the lowest flows are conveyed.
2. Greater channel. For the purposes of this Certification, "greater channel" means the river channel defined by the outermost banks / levees or the outermost edge of the riparian corridor, whichever is larger.

### C. Activities

1. Monterey County Water Resources Agency (MCWRA) shall submit the *Final Salinas River Stream Maintenance Program Permit Application Supplemental Attachment (Final Supplemental Attachment)* by November 30, 2016. The Final Supplemental Attachment shall be a revision of the draft *Salinas River Stream Maintenance Program Permit Application Supplemental Attachment*, dated January 2016 (Draft Supplemental Attachment), incorporating the following additional information:
  - a. Permit conditions contained in this Certification and other agency permits;
  - b. Final *Additional Information for the Salinas River Stream Maintenance Program*; and
  - c. Final *Salinas River Stream Maintenance Program Mitigation Strategy*.
2. MCWRA shall implement the Salinas River Stream Maintenance Program as described in the Final Supplemental Attachment and this Certification. Where conditions contained in this Certification disagree with statements in the Final Supplemental Attachment, this Certification shall govern.
3. MCWRA may only conduct maintenance activities in the 123 secondary channel areas, two selective treatment areas, and three tributary maintenance areas (San Lorenzo Creek, Bryant Canyon Channel, and Gonzales Slough) identified in the Final Supplemental Attachment. MCWRA shall not conduct maintenance activities outside of these identified areas, and access routes to maintenance areas identified in accordance with Special Condition C.5, unless prior written approval is received from the Central Coast Water Board Executive Officer in accordance with Special Condition E.2.
  - a. MCWRA may conduct removal and/or herbicidal treatment of arundo and other invasive species anywhere within the greater channel, subject to the methods described in the Final Supplemental Attachment and the conditions of this Certification, provided that invasive species removal and herbicidal treatment areas are identified in the Annual

- Work Plan and delineated in the pre-maintenance survey in accordance with Special Conditions E.3 and E.4, respectively.
- b. MCWRA may conduct compensatory mitigation planting activities anywhere within the greater channel, subject to Special Condition G and the recommendations of the biologist.
4. MCWRA shall not conduct vegetation or sediment management activities in secondary channels or selective treatment areas within 30 feet of developed areas, including agricultural fields and farm roads, except to construct temporary access routes to maintenance areas in accordance with Special Condition C.5. This condition does not prohibit MCWRA from conducting vegetation or sediment management activities in tributary maintenance areas within 30 feet of developed areas, subject to prior Central Coast Water Board Executive Officer approval of the Annual Work Plan in accordance with Special Condition E.3.
  5. MCWRA shall use existing roads, trails, and access ramps to access maintenance areas to the maximum extent practicable. Access routes shall minimize crossings of the low-flow channel to the maximum extent practicable. Where existing access routes are not sufficient, MCWRA shall construct access routes along sections of existing farm roads. New access routes shall be identified by the biologist during the pre-maintenance survey in accordance with Special Condition E.4 and shall be sited to minimize impacts to native habitat.
    - a. Access routes shall not cross the low-flow channel when water is present, either by bridge, culvert, or ford, unless prior written approval has been obtained from the Central Coast Water Board Executive Officer.
  6. MCWRA shall not conduct maintenance activities in standing or flowing water. MCWRA shall not operate equipment within the wetted stream, or use heavy equipment to cross the wetted stream. Vehicles and equipment shall not enter or cross the low-flow channel when standing or flowing water is present.
  7. Herbicide use shall comply with Water Quality Order No. 2013-0002-DWQ Statewide General NPDES Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications.
  8. Sediment removed from maintenance areas shall be transported outside of the greater channel, and shall be placed in locations outside of waters of the State and in locations where sediment cannot flow into waters of the State, except as authorized below.
    - a. Sediment may be temporarily stockpiled within the greater channel, provided that stockpiles (i) shall be placed only in already-disturbed areas; (ii) shall not be placed on native riparian vegetation (low-stature herbaceous wetland habitat, early- and mid-successional cottonwood habitat, mid-successional willow habitat, and early-successional perennial riparian habitat); and (iii) shall be removed from the greater channel by November 15 of each year.
    - b. Central Coast Water Board staff will consider approval of permanent sediment stockpile locations within the greater channel on a case-by-case basis upon written request from MCWRA. MCWRA shall not leave sediment stockpiles within the greater channel after November 15 without written approval from the Central Coast Water Board Executive Officer, or in any location within the greater channel not specified in the Central Coast Water Board Executive Officer's written approval.

9. Identification of new maintenance areas not already designated in the Final Supplemental Attachment, or relocation or realignment of designated maintenance areas except as described in the Final Supplemental Attachment and Special Conditions E.2. and E.4, is not authorized by this Certification.

**D. Impacts**

1. Total project disturbance in waters of the State shall not exceed 863.7 acres, except as provided for in Special Condition E.2, including the following vegetation communities as defined in the Final Supplemental Attachment:
  - a. Approximately 13.1 acres of low-stature herbaceous wetland habitat;
  - b. Approximately 27.7 acres of early- and mid-successional cottonwood habitat;
  - c. Approximately 12.8 acres of mid-successional willow habitat;
  - d. Approximately 422.3 acres of early-successional perennial riparian habitat;
  - e. Approximately 161.9 acres of sparse herbaceous vegetation;
  - f. Approximately 66.0 acres of arundo-dominated vegetation; and
  - g. Approximately 159.7 acres of unvegetated or bare ground habitat.
2. MCWRA shall limit impacts to low-stature herbaceous wetland habitat, to the greatest extent practicable, to temporary vegetation damage resulting from driving essential equipment across these wetland areas. Vehicles shall not enter wetland areas when water is present or the ground is moist. Other impacts to low-stature herbaceous wetland habitat are not authorized by this Certification.
3. MCWRA shall field-verify the acreage of impacts to low-stature herbaceous wetland habitat, early- and mid-successional cottonwood habitat, mid-successional willow habitat, and early-successional perennial riparian habitat during the pre-maintenance survey (see Special Condition E.4). The field verification shall update the approximate impact acreages listed in the Final Supplemental Attachment for these habitat types, and shall account for any adjustments to the mapped maintenance areas.

**E. Program Management**

1. The Project includes maintenance activities previously permitted under Water Quality Certification No. 32714WQ03 for the Salinas River Multi-Benefit Demonstration Project. MCWRA shall conduct ongoing maintenance activities in previously permitted areas, as well as compensatory mitigation implementation, monitoring, and reporting activities required and/or begun for impacts in previously permitted areas, as described in this Certification No. 32716WQ02. This Certification replaces Water Quality Certification No. 32714WQ03 for the Salinas River Multi-Benefit Demonstration Project.
2. **Adaptive Management.** MCWRA may propose adaptive management, as described in the Final Supplemental Attachment, if flood events cause designated secondary channel maintenance areas to shift location or alignment, or if shifts in the location or alignment of the Salinas River low-flow channel indicate a need to modify a designated secondary channel maintenance area. MCWRA shall not implement adaptive management, as described in the Final Supplemental Attachment, without obtaining prior written approval from the Central Coast Water Board Executive Officer as required in this Certification.
  - a) **By May 31 of each year**, beginning with the 2017 maintenance season, MCWRA shall identify designated secondary channels that may need to be relocated or realigned that

- year, and shall submit to Central Coast Water Board staff, as part of the Annual Report, the list of all potential adaptive management locations.
- b) **By July 15 of each year, beginning with the 2017 maintenance season, MCWRA shall assess and determine the need for adaptive management for any of the designated secondary channel maintenance areas identified in accordance with Special Condition E.2.a, and shall submit to Central Coast Water Board staff a proposal to implement adaptive management. MCWRA shall not implement the proposal unless written approval of the proposal has first been obtained from the Central Coast Water Board Executive Officer.**
- i. **The proposal shall be based on evaluation of field conditions, including visual monitoring of (A) each secondary channel proposed to be relocated or realigned; (B) the reach of the low-flow channel for which each secondary channel proposed to be relocated or realigned is designed to reduce flow; and (C) upstream and downstream connection points between the low-flow channel and each secondary channel proposed to be relocated or realigned.**
  - ii. **The proposal shall implement the design approach described in the Final Supplemental Attachment.**
  - iii. **The proposal shall identify the significant fluvial geomorphological changes to the river, specific maintenance area(s) proposed to be modified, MCWRA's recommendation for the relocation and/or realignment of each specific maintenance area, MCWRA's rationale for the recommendation, and supporting photographs.**
  - iv. **MCWRA shall not propose modification of any secondary channel that was not identified in the list of potential adaptive management locations submitted in accordance with Special Condition E.2.a.**
3. **Annual Work Plan.** MCWRA shall submit an Annual Work Plan to Central Coast Water Board staff each year, beginning with the 2017 maintenance season. The Annual Work Plan shall consist of the following parts:
- a) **By May 1 of each year, MCWRA shall submit a work plan for herbicide treatment of non-native vegetation to be conducted as early as June 1. The work plan shall (i) identify whether MCWRA proposes to conduct herbicide treatment of non-native vegetation that year; and, if early herbicide treatment of non-native vegetation is proposed, (ii) identify the specific areas where activities are proposed that year and the non-native vegetation targeted by the herbicide treatment, and describe the treatment methods MCWRA will implement. MCWRA shall not begin herbicide treatment of non-native vegetation unless written approval has first been obtained from the Central Coast Water Board Executive Officer.**
  - b) **By July 15 of each year, beginning with the 2017 maintenance season, MCWRA shall submit a work plan for all vegetation and sediment management activities to be conducted after August 15, including any herbicide treatment of non-native vegetation not included in the first part of the Annual Work Plan submitted by May 1. The work plan shall identify the specific mapped maintenance areas where maintenance activities are proposed that year, describe the maintenance activities proposed in each maintenance area, and identify the route that will be used to access each maintenance area. MCWRA shall not begin maintenance activities unless written approval has first been obtained from the Central Coast Water Board Executive Officer.**

4. **Pre-Maintenance Survey.** No more than 60 days prior to commencement of maintenance activities, MCWRA shall conduct a pre-maintenance survey of all maintenance areas proposed for maintenance in that year. Pre-maintenance surveys shall be performed by a qualified and trained biologist, and shall:
  - a) Evaluate the proposed alignment of each maintenance area compared to field conditions, and adjust the alignment of the maintenance area where maintenance impacts could be reduced without reducing flood reduction benefits;
  - b) Clearly identify and delineate, by flagging or staking, the boundaries of each maintenance area and points of connection to the low-flow channel;
  - c) Clearly identify and delineate, by flagging or staking, the boundaries of arundo and other invasive species removal and/or herbicide treatment areas that are outside of designated maintenance areas;
  - d) Identify acceptable access routes and temporary low-flow channel crossing locations, where applicable;
  - e) Identify and protect sensitive resources to be avoided;
  - f) Field-verify actual Project Impacts as described in Special Condition D.3; and
  - g) Determine anticipated mitigation obligations resulting from anticipated impacts.
5. **Training.** All personnel who engage in maintenance activities or their oversight at any maintenance area (MCWRA staff, biologists, landowners and/or their representatives who will perform the work, etc.) must attend training, prior to commencement of their activities, on the conditions of this Certification and how to perform their activities in compliance with those conditions. Trainings shall be conducted by a qualified individual with experience in Water Quality Certification conditions and compliance.
6. **Overnight.** MCWRA shall conduct daily monitoring of all active maintenance sites during maintenance activities during business days, and shall inspect on the following Monday any maintenance site where maintenance activities were conducted over the weekend, to ensure that activities are conducted in accordance with the Final Supplemental Attachment, the pre-maintenance survey, and this Certification. Any alteration to the maintenance locations and boundaries established during the pre-maintenance survey must be approved by a qualified biologist. MCWRA shall also (a) quantify actual impacts to low-stature herbaceous wetland habitat, early- and mid-successional cottonwood habitat, mid-successional willow habitat, and early-successional perennial riparian habitat in each maintenance area; b) quantify sediment removed; and c) determine actual mitigation obligations resulting from actual impacts.
7. MCWRA shall prevent the establishment of new arundo growth areas within designated maintenance areas. As part of Pre-Maintenance Surveys (Special Condition E.4) and visual inspection of maintained areas (Special Condition H.1), MCWRA shall note and map any new arundo growth outside of previously mapped arundo growth areas. MCWRA shall treat new arundo growth areas as necessary, and subject to the conditions of this Certification, to achieve less than 1% cover by arundo in new arundo growth areas throughout the term of this Certification.

#### F. Scheduling

1. **Work Window.** MCWRA shall conduct all vegetation and sediment removal activities in waters of the State from June 1 through November 15 each year. No vegetation or sediment removal activities shall be conducted from November 16 through May 31 of any

year unless prior written approval has been obtained from the Central Coast Water Board Executive Officer. Requests to conduct vegetation or sediment removal activities from November 16 through May 31 in any year shall be submitted to Central Coast Water Board staff at least 21 days prior to the planned work date.

- a) Tree planting for compensatory mitigation purposes may occur all year, except that tree planting activities shall not occur during rain events, in standing or flowing water, or on a bank above standing or flowing water. In addition, tree planting activities performed from November 16 through May 31 in any year shall be conducted using hand tools only.
2. Rain Events. MCWRA shall not conduct maintenance, mitigation, or restoration activities during rain events. MCWRA shall comply with the following conditions when scheduling and conducting maintenance, mitigation, or restoration activities:
- a) At 2:00 p.m. on the day before planned activities, if the National Weather Service forecast for the nearest municipality predicts a 25% or more chance of 0.25 inch of rain within 24 hours, MCWRA shall install effective erosion control, sediment control, and other protective measures and shall smooth active sediment removal and/or movement sites in anticipation of potential rain events. MCWRA may plan to conduct maintenance, mitigation, or restoration activities the following day subject to the other conditions of this Certification.
  - b) At 2:00 p.m. on the day before planned activities, MCWRA shall cancel the following day's work, and shall smooth active sediment removal and/or movement areas and remove arundo debris piles outside the outer banks/levees, if flow conditions at any of the locations listed below indicate the possibility that standing or flowing water may occur in areas where maintenance is proposed the following day. (For the purposes of this Certification, "arundo debris pile" means cut material that has been gathered into a pile rather than chipped in place).
    - i. Salinas River at the USGS flow gauge near Bradley (gauge no. 11150500);
    - ii. Salinas River at the USGS flow gauge at the Highway 101 bridge near Soledad (gauge no. 11151700); or
    - iii. Arroyo Seco River at the USGS flow gauge at the Arroyo Seco Road bridge near Soledad (gauge no. 11152050).
  - c) At 7:00 a.m. on the day of planned activities, MCRWA shall cancel that day's work at any maintenance site if any of the following applies at the site:
    - i. Rainfall is occurring. For the purposes of this Certification, "rainfall" includes rain, showers, or drizzle, but not fog or mist; or
    - ii. Standing or flowing water is present in work areas.
  - d) At 7:00 a.m. on the day of planned activities, if the National Weather Service forecast for the nearest municipality predicts a 25% or more chance of rain that day (regardless of amount) but rainfall is not presently occurring, MCWRA may conduct scheduled work activities subject to the following:
    - i. MCWRA shall keep equipment, trash, and non-plant-matter debris within the levees to a minimum.
    - ii. MCWRA shall chip cut arundo debris in place.
    - iii. MCWRA shall not drive equipment across the low-flow river channel or work in any location that requires access across the low-flow river channel.

- iv. MCWRA shall not conduct any sediment removal or movement activities. For the purposes of this Certification, "sediment removal or movement activities" means any shaping of the riverbed beyond what is incidental to vegetation removal activities.
- e) MCWRA shall cease work; install effective erosion control, sediment control, and other protective measures; and remove equipment, trash, and non-plant-matter debris outside the outer banks/levees at any time rainfall begins, as defined in this Certification. MCWRA may resume work when rainfall ceases, provided that rainfall appears to be over for the day and subject to Special Condition F.2.d.

#### **G. Compensatory Mitigation**

1. MCWRA shall implement compensatory mitigation installation, maintenance, and monitoring as described in the *Salinas River Stream Maintenance Program Revised Final Environmental Impact Report*, dated June 2014 (EIR); the Final Supplemental Attachment; and this Certification. Where statements in the Final Supplemental Attachment disagree with statements in the EIR, the Final Supplemental Attachment shall govern. Where conditions contained in this Certification disagree with statements in the EIR or the Final Supplemental Attachment, this Certification shall govern.
2. MCWRA shall provide the following compensatory mitigation for actual Project impacts:
  - a) MCWRA shall mitigate for removal of non-willow riparian trees (e.g., cottonwood, alder, box elder, sycamore) larger than two inches in diameter by planting cottonwood, sycamore, or alder trees at a 3:1 ratio (trees planted to trees removed).
  - b) MCWRA shall mitigate for removal of willows equal to or greater than six inches in diameter at a 2:1 ratio (trees planted to trees removed).
  - c) MCWRA shall mitigate for impacts to mid-successional willow habitat through the removal of arundo at a 3:1 ratio (acres of arundo removed to acres of mid-successional willow habitat removed). Arundo removal as compensatory mitigation for impacts to mid-successional willow habitat shall occur within the greater channel, but only outside designated maintenance areas (including secondary channels, selective treatment areas, and tributary maintenance areas).
  - d) MCWRA shall mitigate for impacts to early-successional perennial riparian habitat through the removal of arundo at a 0.5:1 ratio (i.e., one-half acre of arundo removed to one acre of early-successional perennial riparian habitat removed). Arundo removed from designated maintenance areas may be counted toward the mitigation requirement for impacts to early-successional perennial riparian habitat at one-half the value of arundo removed outside the designated secondary channels (i.e., one acre of arundo removal from designated maintenance areas will provide compensatory mitigation for one acre of early-successional perennial riparian habitat removed).
3. Mid-successional willow and early-successional perennial riparian habitats growing as secondary vegetation within early- to mid-successional cottonwood forest shall be counted as mid-successional willow and early-successional perennial riparian habitat for the purpose of calculating mitigation obligations.
4. MCWRA shall mitigate for impacts to low-stature herbaceous wetland habitat by restoring impacted wetland areas to pre-impact conditions.
5. MCWRA shall be required to provide compensatory mitigation for impacts only once during the 10-year permit term. Repeat maintenance activities in a previously-maintained area shall not require additional compensatory mitigation.

- a) Repeat maintenance activities in maintenance areas where initial maintenance was conducted under Certification No. 32714WQ03 prior to issuance of this Certification No. 32716WQ02, and for which compensatory mitigation has also been provided under Certification No. 32714WQ03, need not be mitigated again during the 10-year term of this Certification No. 32716WQ02.
6. MCWRA shall re-treat arundo removal areas as described in the Final Supplemental Attachment and as necessary to achieve final performance criteria.
7. Compensatory mitigation shall achieve the following final performance criteria:
  - a) Mitigation tree plantings shall achieve 85% survival five years after planting.
  - b) Arundo removal areas, including arundo removed within designated maintenance areas and not intended as mitigation for impacts, shall achieve 5% or less cover by arundo five years after initial removal.
  - c) Impacted wetland areas shall achieve pre-maintenance conditions two years after impact.
  - d) Mitigation plantings must be without supplemental irrigation for at least two years prior to assessment of final performance criteria.
8. MCWRA shall complete implementation of mitigation plantings within 12 months of completion of maintenance activities for which the plantings are required as compensatory mitigation. MCWRA shall complete initial removal of arundo within 12 months of the completion of maintenance activities for which the arundo removal is required as compensatory mitigation.
9. MCWRA shall restore all other temporary impacts (e.g., access routes, temporary crossings, etc.) to pre-maintenance conditions. Temporary access routes shall be restored to pre-maintenance conditions at the end of the maintenance season. Access routes not removed at the end of the maintenance season in which they are constructed shall be considered "permanent" access routes, and MCWRA shall provide compensatory mitigation for impacts to native vegetation in accordance with Special Condition G. "Permanent" access routes that MCWRA does not expect to use in the future shall be restored to pre-maintenance conditions at the end of the permit term.

#### H. Inspections and Monitoring

1. MCWRA shall visually inspect all maintenance sites and areas of the greater channel adjacent to maintenance sites following completion of maintenance activities and for one subsequent rainy season to ensure that maintenance activities are not causing excessive erosion or other water quality problems. If maintenance activities do cause water quality problems, MCWRA shall contact the Central Coast Water Board staff member overseeing the Project. MCWRA shall be responsible for obtaining any additional permits necessary for implementing plans for restoration to prevent further water quality problems.
2. Following all flood events equal to or exceeding 42,800 cfs (10-year event), as measured at United States Geological Survey (USGS) stream gage 11152500 near Spreckels, MCWRA shall visually inspect the low-flow channel and all designated secondary channels within the Project area for channel movement due to fluvial processes. MCWRA shall conduct this monitoring after flood waters have receded and the low-flow channel and secondary channel areas are visible. MCWRA shall submit the results of the visual inspection, including

Identification of any channel movements due to fluvial processes, to Central Coast Water Board staff no later than May 31 of the following year as part of the annual report.

3. MCWRA shall monitor compensatory mitigation planting sites each year for five years following completion of planting. Monitoring shall include assessment of growth, survival, percent cover, general health and stature, and progress toward achieving final performance criteria; and shall determine whether remedial actions are needed to achieve final performance criteria. Monitoring shall also include photographs taken from vantage locations identified prior to revegetation activities that enable Central Coast Water Board staff to identify changes in size and cover of plants. If final performance criteria are not achieved within five years, MCWRA shall continue biennial (every other year) monitoring and maintenance until final performance criteria are achieved.
4. MCWRA shall monitor all arundo removal areas each year for five years following completion of initial removal, including arundo removed within designated maintenance areas and not intended as mitigation for impacts. Monitoring shall include assessment of arundo regrowth and progress toward achieving success criteria, and shall determine whether remedial actions are needed to achieve final performance criteria. If final performance criteria are not achieved within five years, MCWRA shall continue biennial monitoring and maintenance until final performance criteria are achieved.
5. During monitoring of arundo removal areas outside of designated secondary channels, MCWRA shall also assess natural recruitment of native vegetation. Monitoring shall include visual assessment of the amount, extent, and distribution of plant recruitment; plant species recruited; extent of native versus non-native plants recruited; and overall health and stature of native plants recruited.
6. MCWRA shall monitor impacted low-stature herbaceous wetland areas for two years after the initial impact.
7. MCWRA shall monitor temporary impact areas for two years after completion of restoration activities to ensure that impact areas are restored to pre-maintenance conditions.

#### **I. Long-Term Effectiveness Assessment**

1. MCWRA shall develop a Long-Term Effectiveness Assessment Plan to (a) evaluate the Project's overall effectiveness at achieving projected flood reduction benefits while also protecting beneficial uses and habitat function, and (b) identify Project- and watershed-based actions MCWRA can implement to optimize Project effectiveness and watershed health and function. MCWRA shall submit the plan for review and approval by the Central Coast Water Board Executive Officer with the 2017 Annual Report by May 31, 2017. The plan shall describe the information MCWRA will collect, the monitoring activities MCWRA will conduct to collect the information, and the analyses MCWRA will perform to evaluate the Project's overall effectiveness.
2. The Long-Term Effectiveness Assessment Plan shall include at least the following information and analyses:
  - a) Effectiveness monitoring: MCWRA shall conduct pre- and post-maintenance topographic surveys of 10% of all secondary channels in all river management units, and shall use the survey data to determine how the maintenance areas are functioning and assess the sediment transport characteristics of the maintenance areas.

- b) Design verification monitoring: MCWRA shall analyze all flow events equal to or exceeding 25,450 cfs (5-year event), as measured at USGS stream gage 11152500 near Spreckels, to answer the following questions, at a minimum:
- Are secondary channels activated under the flow conditions anticipated by the design?
  - Are secondary channels functioning as designed?
  - Is channel complexity (primary and secondary channels, channel braiding) increasing as anticipated in the design?
  - Where flow velocity data are available, are flow velocities in the low-flow channel decreasing as anticipated in the design?
- c) Flood reduction monitoring: MCWRA shall analyze all flow events equal to or exceeding 42,800 cfs, as measured at USGS stream gage 11152500 near Spreckels, to determine whether the Project achieves the anticipated flood reduction benefits. The analysis shall answer the following questions, at a minimum:
- How does the observed extent of flooding compare to the extent of flooding predicted by the hydraulic model?
  - Where flow velocity data are available, how do observed flow velocities compare to flow velocities predicted by the hydraulic model?
- d) Biological function monitoring: MCWRA shall collect and analyze information indicative of the Project's overall effect on beneficial uses and habitat function. Biological function monitoring shall include observation and analysis designed to assess the following elements, at a minimum:
- Recruitment of native riparian vegetation in areas where arundo was removed for mitigation purposes (outside of designated maintenance areas);
  - Increasing diversity of riparian habitat conditions (earlier to later successional vegetation communities); and
  - Increasing wildlife movement and habitation within the greater channel.
- e) Watershed assessment: MCWRA shall collect and analyze information to assess the Project and its effects within the larger context of the Salinas River watershed in Monterey County, with the long-term goal of identifying implementation actions that optimize watershed health and function while also achieving MCWRA river management objectives. Watershed assessment shall include analysis of the following, at a minimum:
- i. The interaction between the Project and known watershed issues, such as flood control, river flows, reservoir releases, water quality, habitat loss, ecological function loss, and fish habitat and passage;
  - ii. The interaction between the Project and all other MCWRA river management activities (current and planned), such as reservoir operations and activities downstream;
  - iii. The cumulative effect of the Project and all other MCWRA river management activities (current and planned) on watershed health and function;
  - iv. The most effective use of management resources to optimize watershed health and function while also achieving MCWRA river management activity purposes, such as the optimal collective use of mitigation resources;
  - v. Potential implementation actions or modifications to the Project or other river management activities to optimize watershed health and function, while also achieving MCWRA river management objectives; and
  - vi. Recommended implementation actions or modifications to the Project or other river management activities to optimize watershed health and function, while also achieving MCWRA river management activity purposes.

3. The plan shall be developed by qualified personnel with expertise in the biology of riparian ecosystems, fluvial geomorphology, and hydrologic and hydraulic modeling of braided riverine systems.
4. The plan shall include a timeline and interim objectives for submitting the following Long-Term Effectiveness Assessment Reports to the Central Coast Water Board:
  - a) A first report, covering the first five years of Project implementation, with the 2021 Annual Report by May 31, 2021 (this first report need not report on Special Conditions I.2.e.iv-vi); and
  - b) A final report, covering nine years of Project implementation, with the 2025 Annual Report by May 31, 2025.
5. The Long-Term Effectiveness Assessment Reports shall include the analyses, assessments, and other information identified in Special Condition I.1 and the approved Long-Term Effectiveness Assessment Plan.

**J. Reporting**

1. MCWRA shall submit all required reporting to the Central Coast Water Board staff member overseeing the Project and to RB3\_401Reporting@waterboards.ca.gov.
2. Streambed Alteration Agreement. MCWRA shall submit a signed copy of the Department of Fish and Wildlife's streambed alteration agreement to the Central Coast Water Board immediately upon execution and prior to commencement of maintenance activities.
3. Final Supplemental Attachment. By November 30, 2016, MCWRA shall submit the Final Salinas River Stream Maintenance Program Permit Application Supplemental Attachment in accordance with Special Condition C.1.
4. Annual Work Plans. By May 1 of each year, MCWRA shall submit to the Central Coast Water Board the Annual Work Plan for herbicide treatment of non-native vegetation in accordance with Special Condition E.3.a. By July 15 of each year, MCWRA shall submit to the Central Coast Water Board the Annual Work Plan for mechanical vegetation and sediment management activities in accordance with Special Condition E.3.b.
5. Annual Report. By May 31 of each year, MCWRA shall submit to the Central Coast Water Board an annual report. MCWRA shall submit Annual Reports until MCWRA has conducted all required monitoring, mitigation has achieved all final performance criteria, and MCWRA has notified the Central Coast Water Board of mitigation completion. Each Annual Report shall include, at a minimum:
  - a) Identification of any adaptive management modifications made in accordance with Special Condition E.2;
  - b) A summary of training activities, including information demonstrating compliance with Special Condition E.5;
  - c) A summary of pre-maintenance survey activities, including a description of any adjustments made in the field to maintenance area alignments as described in Special Condition E.4, and observation of any new arundo growth areas as described in Special Condition E.7;
  - d) A description of maintenance activities performed, including identification of all maintenance areas where maintenance occurred, and a summary of the work performed;

- e) The quantity of impacts to early- and mid-successional cottonwood, mid-successional willow, and early-successional perennial riparian habitats;
- f) A description of impacts to low-stature herbaceous wetland habitat, including the quantity of impact and how impacts were restored;
- g) The quantity of mitigation required to compensate for Project impacts occurring since the commencement of Project maintenance activities, the quantity of mitigation implemented since the commencement of Project maintenance activities, and the quantity of mitigation that remains to be implemented in order to satisfy mitigation requirements for all impacts to-date;
- h) A description of the results of required visual inspections of the Project site and areas of waters of the State adjacent to Project impact areas, including:
  - i. Erosion conditions;
  - ii. Water quality and beneficial use conditions;
  - iii. Observation of any new arundo growth areas, and treatment results (percent cover of arundo) in previously mapped new arundo growth areas, as described in Special Condition E.7;
  - iv. Representative photographs of the Project site and areas of waters of the State adjacent to Project impact areas; and
  - v. If the visual inspection monitoring period is over, but water quality problems persist, the Annual Report shall identify corrective measures to be undertaken, including extension of the monitoring period until the Project is no longer causing excessive erosion or other water quality problems.
- i) Identification of all flow events equal to or exceeding 25,450 cfs and all flow events equal to or exceeding 42,800 cfs, as measured at USGS stream gage 11152500 near Spreckels;
- j) Mitigation reporting, including the following information:
  - i. A description of mitigation activities completed, including type and quantity of mitigation, date mitigation activities began, and date mitigation activities were completed;
  - ii. Verification that mitigation activities were conducted according to the Final Supplemental Attachment and the conditions of this Certification;
  - iii. The results of mitigation monitoring conducted in accordance with the conditions of this Certification and as described in the Final Supplemental Attachment;
  - iv. Any remedial actions taken or needed;
  - v. Any additional information specified in the Final Supplemental Attachment; and
  - vi. Annual photo-documentation representative of all mitigation areas, taken from vantage points from which Central Coast Water Board staff can identify changes in size and cover of plants. Compare photos of installed mitigation with photos of the mitigation areas prior to installation.
- k) A description of mitigation completion status that identifies the amount of mitigation monitoring and maintenance remaining, or certifies that mitigation is complete and all required mitigation monitoring and maintenance has been conducted and all final performance criteria achieved. If the monitoring period is over, but all final performance criteria have not been achieved, the Annual Report shall identify corrective measures to be undertaken, including extension of the monitoring period until the criteria are met.

6. **Potential Adaptive Management Locations.** By May 31 of each year, MCWRA shall submit with the Annual Report any potential adaptive management locations, in accordance with Special Condition E.2.a.
7. **Adaptive Management Proposals.** By July 15 of each year, MCWRA shall submit the adaptive management proposal described in Special Condition E.2.b, if applicable.
8. **Program Reassessment Reporting.** By May 31, 2021, MCWRA shall submit the information listed below to the Central Coast Water Board with the 2021 Annual Report. Central Coast Water Board staff will use the information to assess the implementation and effectiveness of the Project. Submitted information shall include:
  - a) A summary of maintenance activities, impacts, and mitigation activities conducted in the first five years of Project Implementation; and
  - b) A summary of all monitoring information collected, as well as a detailed description and results of all analysis required, in accordance with Special Condition H.
9. **Long-Term Effectiveness Assessment Reporting.** MCWRA shall submit to the Central Coast Water Board the following Long-Term Effectiveness Assessment Plan reporting developed in accordance with Special Condition I. Long-Term Effectiveness Assessment Plan reports shall be submitted with the Annual Report.
  - a) By May 31, 2017, the Long-Term Effectiveness Assessment Plan;
  - b) By May 31, 2021, the first report; and
  - c) By May 31, 2025, the final report.

**K. Records and Data Management**

1. MCWRA shall develop and maintain a data management system to track maintenance and mitigation activities. The data management system shall be capable of tracking the following information:
  - a) The date of all required trainings;
  - b) The date of all required pre-maintenance surveys;
  - c) Adjustments made to maintenance area alignments resulting from adaptive management decisions or pre-maintenance surveys;
  - d) The date maintenance activities occurred in each maintenance area, including repeat maintenance efforts in the same maintenance area(s);
  - e) The quantity of impacts to habitat types requiring mitigation, and the date the impact occurred;
  - f) Identification of all mitigation areas, including the location and size of each mitigation area;
  - g) The date mitigation implementation was completed in each mitigation area;
  - h) The date of all visual inspections required by Special Conditions H.1 and H.2;
  - i) The date of all compensatory mitigation monitoring activities required by Special Conditions H.3 through H.7, and the date of any remedial actions taken;
  - j) A comparison of the total mitigation obligation accrued with the total quantity of compensatory mitigation implemented; and
  - k) The date of all Long-Term Effectiveness Assessment Monitoring activities conducted in accordance with Special Condition I.

2. MCWRA shall maintain records of all visual inspections and monitoring events conducted in accordance with Special Condition H, including personnel performing the inspections, inspection dates, locations, observations, and corrective actions taken.
3. MCWRA shall retain all required records for a period of at least 10 years following completion of the project.

**L. General Project Requirements**

1. All work performed within waters of the State shall be completed in a manner that minimizes impacts to beneficial uses and habitat. Measures shall be employed to minimize land disturbances that will adversely impact the water quality of waters of the State. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete Project implementation.
2. MCWRA shall implement effective erosion control, sediment control, and other protective measures prior to the start of any rain events.
3. MCWRA shall remove all equipment, trash, debris, and arundo debris piles outside the outer banks/levees at the end of each work day.
4. MCWRA shall retain a spill plan and appropriate spill control and clean up materials (e.g., oil absorbent pads) onsite in case spills occur.
5. All vehicles and equipment used on site shall be well maintained and checked daily for fuel, oil, and hydraulic fluid leaks or other problems that could result in spills of toxic materials. All vehicle fueling and maintenance activity shall occur at least 100 feet away from the greater channel of the Salinas River and other waters of the State, and in designated staging areas, unless a requested exception on a case-by case basis granted by prior written approval has been obtained from the Central Coast Water Board Executive Officer.
6. Dewatering and stream diversion measures are not authorized based on the application.
7. All construction-related equipment, materials, and any temporary BMPs no longer needed shall be removed and cleared from the site upon completion of the Project.
8. Central Coast Water Board staff shall be notified if mitigations as described in the 401 Water Quality Certification application for this Project are altered by the imposition of subsequent permit conditions by any local, state or federal regulatory authority. MCWRA shall inform Central Coast Water Board staff of any modifications that interfere with compliance with this Certification.

**CENTRAL COAST WATER BOARD CONTACT PERSON:**

Jon Rohrbough  
(805) 549-3458  
Jon.Rohrbough@waterboards.ca.gov

Please refer to the above certification number when corresponding with the Central Coast Water Board concerning this project.

**WATER QUALITY CERTIFICATION:**

I hereby issue an order certifying that as long as all the conditions listed in this Certification are met, any discharge from the 2016-2025 Salinas River Stream Maintenance Program shall comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated pursuant to State Water Board Water Quality Order No. 2003-0017-DWQ, which requires compliance with all conditions of this Certification.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicant's project description and the attached Project Information and Conditions, and (b) compliance with all applicable requirements of the Central Coast Water Board's policies and Water Quality Control Plan (Basin Plan).

**John M.  
Robertson**

Digitally signed by John M.  
Robertson

Date: 2016.08.31 16:58:32 -07'00'

August 31, 2016

Date

---

John M. Robertson  
Executive Officer  
Central Coast Water Board

**Attachment 1  
PROJECT INFORMATION AND CONDITIONS**

Application Date	Received: December 25, 2016 Completed: February 3, 2016
Applicant	David E. Chardavoynne Monterey County Water Resources Agency P.O. Box 930 Salinas, CA 93901 Email: ChardavoynneDE@co.monterey.ca.us 831-755-4860
Applicant Representatives	Elizabeth Krafft Monterey County Water Resources Agency P.O. Box 930 Salinas, CA 93901 Email: kraffttea@co.monterey.ca.us 831-755-4860
Project Name	2016-2025 Salinas River Stream Maintenance Program
Application Number	32716WQ02
Type of Project	Bank and Channel Modification
Project Location	Monterey County From: Latitude: 35° 58' 16.55" N      Longitude: -120° 53' 20.09" W To: Latitude: 36° 43' 54.76" N      Longitude: -121° 46' 58.70" W
County	Monterey
Receiving Water(s)	Salinas River, San Lorenzo Creek, Bryant Canyon Channel, Gonzales Slough 309.10, 309.30, and 309.40 Salinas Hydrologic Unit
Water Body Type	Streambed, river
Designated Beneficial Uses	Municipal and Domestic Supply (MUN) Agricultural Supply (AGR) Industrial Process Supply (PROC) Industrial Service Supply (IND) Ground Water Recharge (GWR) Water Contact Recreation (REC-1) Non-Contact Recreation (REC-2) Wildlife Habitat (WILD) Cold Fresh Water Habitat (COLD) Warm Fresh Water Habitat (WARM) Migration of Aquatic Organisms (MIGR) Spawning, Reproduction, and/or Early Development (SPWN) Rare, Threatened or Endangered Species (RARE) Commercial and Sport Fishing (COMM)
Project Description (purpose/goal)	The purpose of this Project is to provide flood risk reduction that protects ecological conditions.  The Project includes maintenance activities in seven river management

	<p>units (RMUs) along the Salinas River in Monterey County, including RMUs 4 and 5, which were previously permitted under Water Quality Certification No. 32714WQ03 for the Salinas River Multi-Benefit Demonstration Project. This Certification replaces Water Quality Certification No. 32714WQ03.</p> <p>Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff understands that the Project includes the following activities:</p> <ol style="list-style-type: none"> <li>1. Removing vegetation from 123 secondary channels and two selective treatment areas within the greater channel of the Salinas River between river miles 2 and 94;</li> <li>2. Removing vegetation from portions of three tributaries (San Lorenzo Creek, Bryant Canyon Channel, and Gonzales Slough);</li> <li>3. Removing sediment from designated maintenance areas; and</li> <li>4. Constructing temporary access routes into the Salinas River greater channel where needed to conduct vegetation and sediment management activities.</li> </ol>
U.S. Army Corps of Engineers Permit No.	Regional General Permit No. 22309S
Federal Public Notice	NA
Dept. of Fish and Wildlife Streambed Alteration Agreement	Streambed Alteration Agreement is pending. Final, signed copy shall be forwarded immediately upon execution.
Status of CEQA Compliance	Environmental Impact Report Lead Agency: Monterey County Water Resources Agency (CEQA Findings of Fact are Included In Attachment 2)
Total Certification Fee	\$90,000
Area of Disturbance	Approximately 863.7 acres total Streambed: 863.7 acres temporary
Dredge Volume	NA
Excavation Volume	Approximately 554,420 cubic yards total (maximum, per year) Streambed: 554,420 cubic yards temporary (maximum, per year)
Fill Volume	NA
Compensatory Mitigation	See Special Condition G
Monitoring Requirements	See Special Conditions H and I
Reporting Requirements	See Special Condition K

**Attachment 2  
FINDINGS**

**A. CEQA Findings of Facts**

1. **Environmental Review.** On July 29, 2014, MCWRA, as lead agency, certified a Final Environmental Impact Report (EIR) (State Clearinghouse No. 2011041066) for the Project and filed a Notice of Determination with the State Clearinghouse on July 31, 2014. The Central Coast Water Board is a responsible agency under CEQA (Pub. Resources Code, § 21089), and in making its determinations and findings must presume that MCWRA's certified Final EIR comports with the requirements of CEQA and is valid (Pub. Resources Code, § 21167.3). The Central Coast Water Board has reviewed and considered the Final EIR and finds that the Final EIR prepared by MCWRA addresses the Project's water resource impacts (Cal. Code Regs., tit. 14, § 15096, subd. (f)). The Final EIR includes the mitigation, monitoring, and reporting program developed by MCWRA for all mitigation measures that have been adopted for the Project to reduce potential significant impacts (Pub. Resources Code, § 21081.6, subd. (a)(1); Cal. Code Regs., tit. 14, § 15091, subd. (d)).
2. **Incorporation by Reference.**
  - a) Pursuant to CEQA, these Findings of Facts (Findings) support the issuance of this Certification based on the Project Final EIR, the application for this Certification, and the *Salinas River Stream Maintenance Program Permit Application Supplemental Attachment*, dated January 2016 (Draft Supplemental Attachment).
    - i. The Project Draft EIR, which includes analyses of broad impacts and serves as a first tier document for the Final EIR, is available at:  
[http://www.mcwra.co.monterey.ca.us/salinas\\_river\\_maintenance/eir.php](http://www.mcwra.co.monterey.ca.us/salinas_river_maintenance/eir.php).
    - ii. All CEQA project impacts, including those discussed in subsection C below, are analyzed in detail in the Project Final EIR which is incorporated herein by reference. The Project Final EIR is available at:  
[http://www.mcwra.co.monterey.ca.us/salinas\\_river\\_maintenance/eir.php](http://www.mcwra.co.monterey.ca.us/salinas_river_maintenance/eir.php).
  - b) Requirements under the purview of the Central Coast Water Board in the mitigation, monitoring, and reporting program are incorporated herein by reference.
  - c) MCWRA's application for water quality certification of the Project, including the Final Supplemental Attachment and all other supplemental information provided, is incorporated herein by reference.
3. **Findings.** The Final EIR describes the potential significant environmental effects to water resources. Having considered the whole of the record (including comments received during the public review process for this Certification), the Central Coast Water Board makes the following findings:
  - a) Findings regarding impacts that will be mitigated to a less than significant level. (Pub. Resources Code, § 21081, subd. (a)(1); Cal. Code Regs., tit. 14, § 15091, subd. (a)(1).)  

*There are changes or alterations that have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.*

**I.A. Potential Significant Impact: Loss of Waters of the State**

The Project could result in the loss and/or disturbance of waters of the State. The Project includes targeted removal of riparian vegetation from the Salinas River greater channel. The Project's vegetation removal activities could result in temporary disturbance to and loss of riparian habitat, and could thereby increase habitat fragmentation and reduce riparian habitat quality.

**i.B. Facts in Support of Finding:**

All Project impacts are temporary. In addition, the Project provides mitigation for impacts to riparian habitat. The Project includes removal of arundo, which will directly improve ecological function of the riparian corridor and will allow recruitment of native habitat in arundo removal areas.

**II.A. Potential Significant Impact: Water Quality**

The Project could result in degradation of water quality, with corollary degradation of beneficial uses. The Project includes operation of vehicles and equipment within the Salinas River greater channel.

**II.B. Facts in Support of Finding:**

All maintenance activities will be conducted between June 1 and November 15 each year, when water is unlikely to be present in the Salinas River outside the low-flow channel. No maintenance activities, including operation of vehicles and equipment, will be permitted in standing or flowing water. No vehicles or equipment will be permitted to enter or cross the low-flow channel when standing or flowing water is present. In addition, this Certification includes standard water quality protection provisions addressing staging, vehicle refuelling and maintenance, and activities during rain events.

**iii.A. Potential Significant Impact: Steelhead**

The Project's vegetation removal and sediment management activities could affect steelhead migration habitat due to increased turbidity. Project activities could increase the amount of fine sediment available to be mobilized by the river and increase water column turbidity, particularly during high flows in the winter and spring.

**iii.B. Facts in Support of Finding:**

Sediment removed during maintenance activities will not be stockpiled within waters of the State, and will be disposed of outside of the greater channel, unless otherwise approved in writing by the Central Coast Water Board Executive Officer, on a case-by-case basis. MCWRA will implement erosion and sediment controls to prevent sediment from stockpile and disposal areas from re-entering the greater channel. The Salinas River is already a very turbid waterbody. The FEIR estimates the average sediment load carried by the Salinas River to be 1.57 million cubic yards.<sup>1</sup> In addition, Project activities will disturb only 863 acres out of approximately

<sup>1</sup> *Salinas River Stream Maintenance Program Revised Final EIR*, volume 1. June, 2014. (p. 3-142).

12,400 acres of riparian habitat within the greater channel estimated by the EIR.<sup>2</sup> Sediment mobilization related to vegetation and sediment management activities would make a negligible contribution to sediment load compared with sediment supplied by the riverbed itself and from upland sources conveyed to the river during storm events.<sup>3</sup> The Project also includes erosion and sediment control measures to reduce sediment discharges related to Project activities.

**iv.A. Potential Significant Impact: Sensitive Species**

The Project could affect sensitive species through runoff of sediments or pollutants. The Project includes herbicide application for control of non-native and invasive species.

**iv.B. Facts in Support of Finding:**

The Project includes erosion and sediment control measures to reduce pollutant discharges related to Project activities. Herbicides will be limited to products approved by the U.S. Environmental Protection Agency for aquatic use, and herbicide application will comply with Water Quality Order No. 2013-0002-DWQ Statewide General NPDES Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications.

**4. Determination.**

The Central Coast Water Board has determined that the Project, when implemented in accordance with the mitigation, monitoring, and reporting program and the conditions in this Certification, will not result in any significant adverse water quality or supply impacts. (Cal. Code Regs., tit. 14, § 15096, subd. (h).) The Central Coast Water Board will file a NOD with the SCH within five (5) working days from the issuance of this Certification. (Cal. Code Regs., tit. 14, §§ 15096, subd. (i).)

**B. Public Review and Comment**

1. Central Coast Water Board staff posted MCWRA's application for water quality certification for the Project on February 1, 2016, for a 21-day public review and comment period. Notice of the application was posted on the Central Coast Water Board website and distributed to interested parties.
2. Central Coast Water Board staff posted the draft Certification on July 6, 2016, for a 23-day public review and comment period. Notice of the draft Certification was posted on the Central Coast Water Board website and distributed to interested parties. The Central Coast Water Board also discussed the application for water quality certification at its July 29, 2016 Board Meeting, and the discussion included public comment on the draft Certification.
3. Central Coast Water Board staff reviewed and considered all public comments during preparation of this Certification. Central Coast Water Board staff prepared written responses to public comments, and will post the responses, along with the final Certification, on the Central Coast Water Board website, and distribute notice of Central Coast Water Board staff responses to comments and this Certification to the interested parties list.

<sup>2</sup> *ibid.*, p. 2-26.

<sup>3</sup> *Salinas River Stream Maintenance Program Revised Final EIR*, volume 1. June, 2014. (pp. 3-141 to 3-142).

4. **The Central Coast Water Board Executive Officer has reviewed all public comments received on MCWRA's application for water quality certification and on this Certification, Central Coast Water Board staff's responses to comments, and this Certification.**

**C. Permit Renewal**

1. **MCWRA implements the Project within a large portion of the Salinas River in Monterey County, and within the context of other MCWRA river management activities. During the length of this Certification term, MCWRA is likely to alter some of its other river management activities, or implement new management activities. These changes or new activities are likely to affect beneficial uses and water quality. Further, as this Project is implemented, monitored, and assessed, understanding of the Project's impacts to beneficial uses and water quality will increase. Therefore, in order to continue to ensure the Project will meet water quality standards and avoid impacts to the maximum extent practicable, the Central Coast Water Board needs information to assess the cumulative and mutually interactive effects of the Project and other MCWRA river management activities within the larger context of overall watershed health, prior to certifying the Project for a subsequent permit term. This Certification includes provisions requiring MCWRA to collect and analyze information to assess the Project within the larger context of the Salinas River watershed in Monterey County. This Certification also includes conditions requiring MCWRA to develop recommendations for ongoing management of the Project and other MCWRA river management activities based on this information and analysis. The Central Coast Water Board finds that a long-term river management plan developed on the basis of the information, analyses, and recommendations required by this Certification is necessary to ensure future iterations of the Project will meet water quality standards and avoid impacts to the maximum extent practicable. Therefore, any future Certification application for this Project, or for any future stream maintenance activities after the term of this Certification, must include a long-term river management plan developed on the basis of the information, analysis, and recommendations required in this Certification in order for the Central Coast Water Board to issue a new Certification.**





# SALINAS RIVER CHANNEL STREAM MAINTENANCE PROGRAM'S RIVER MANAGEMENT UNIT ASSOCIATION, INC.

*Purpose: To fund and secure funding for floodplain management, public infrastructure safety and maintenance, and stream maintenance activities by landowner and operator members to improve the conditions for all farming along the Salinas River in Monterey County, California.*

## Landowner Membership Form

LANDOWNER

(Company/Entity):

\_\_\_\_\_ I am also an operator on this property.

PRIMARY CONTACT: \_\_\_\_\_

PHONE: \_\_\_\_\_

E-MAIL ADDRESS: \_\_\_\_\_

*Any **one (1)** of the following individuals, each of which are duly authorized as a designated representative of the undersigned entity, may act for the undersigned entity in any election of Directors or voting on any issue submitted to the Members, and to act for and bind the undersigned entity in connection with the conduct of any transaction or business between the entity and the SALINAS RIVER CHANNEL STREAM MAINTENANCE PROGRAM'S RIVER MANAGEMENT UNIT ASSOCIATION (the "Corporation"):*

\_\_\_\_\_  
*This designation shall remain in effect until it is revoked by the undersigned entity and written notice of such revocation is given to the Corporation. Only one person may vote on this specific landowner member's behalf at any given meeting.*

### SEE ATTACHED FOR CURRENT COST SHEET OF RATES

As a landowner, you are agreeing to enroll your property in this program. Landowner membership is required for a grower/operator to enroll and landowner permission is required, although a grower/operator may pay the fee on behalf of their landowner, if they so choose. *All unique landowners must enroll and pay this fee, regardless of how many parcels they enroll.*

All Assessor Parcel Numbers Associated with this landowner's name that I am enrolling (no need to include last three "000" digits):

\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_; \_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_; \_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_;  
\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_; \_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_; \_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_;

Operator Names Associated with these APNs who have my permission to enroll in this Association include:

\_\_\_\_\_ ; \_\_\_\_\_ ; \_\_\_\_\_

I acknowledge no work can be done until I sign all required forms associated with the 401 and 404 permits held by Monterey County Water Resources Agency and the 1600 permit held by the Monterey County Resource Conservation District.

Signed:

\_\_\_\_\_

\_\_\_\_\_

Name

Signature

\_\_\_\_\_

Date

Mail all pledge payments and this form to: 512 Pajaro St., Salinas, CA 93901

**BYLAWS OF  
SALINAS RIVER CHANNEL STREAM MAINTENANCE PROGRAM'S RIVER  
MANAGEMENT UNIT ASSOCIATION, INC.  
A California Nonprofit Mutual Benefit Corporation**

**ARTICLE I  
OFFICES**

Section 1. **Principal Office.** The address of the corporation's principal office is 512 Pajaro Street, Salinas, California 93901. The Board of Directors (below called the "Board") is granted authority to change the location of the principal office. Any change shall be noted on the Bylaws opposite this Section 1, or this Section 1 may be amended to state the new location.

**ARTICLE II  
MEMBERSHIP**

Section 1. **Classification and Qualification of Members.** The Corporation shall have two classes of members, regular members (referred to herein as "members") and Honorary Members. Members of the Corporation are those persons as defined in Corporations Code Section 5065 who are (i) landowners of riverine land or operators of riverine land located within a River Management Unit ("RMU") along the Salinas River mainstem, San Lorenzo Creek, Bryant Canyon Channel, or Gonzales Slough tributaries, in the County of Monterey, California, who desire to further the Corporation's purpose of funding and securing funding for floodplain management, public infrastructure safety and maintenance, and stream maintenance activities by landowner and operator members to improve the conditions for all farming along the Salinas River in Monterey County, California; (b) have paid a membership fee, as determined by the Board, (c) whose application for membership has been approved by the Membership Committee, which shall be appointed by the Board in conformity with Section 14 of Article III of these Bylaws; and (d) whose membership has not terminated pursuant to any provision of these Bylaws. Each qualifying person is entitled to one membership. Honorary Members of the Corporation are those persons as defined in Corporations Code Section 5065 who are not otherwise eligible to be members of the Corporation but who, in the opinion of the Board of Directors, have provided benefit to or performed services for the Corporation warranting their appointment as Honorary Members. Any subsidiary of the Corporation may not be admitted to membership of the Corporation. A person, as defined in Corporations Code Section 5065 may not hold more than one membership in each class. "Operators" are tenants of such riverine land who is authorized in writing by the landowners of such land to apply for and become a member of the Corporation. A "River Management Units" or "RMUs" shall refer to the seven (7) delineated areas located along the Salinas River in Monterey County, California, from River Mile 94 to River Mile 2, designated by the Resource Conservation District of Monterey County.

The Corporation has the right to refer to Honorary Members as "members," however, no such reference shall constitute anyone a member within the meaning of Section 5056 of the California Nonprofit Corporation Law or the above provisions of this Section 1 unless that person or entity has applied for regular membership as above set forth and has become and remains a regular member. The corporation may confer by amendment of its Articles or of these Bylaws some or all of the rights of a member, as set forth in this Article II, upon an Honorary Member who does not have the right to vote on any of the matters set forth in

the third paragraph of this Section 1 or for the selection of delegates who possess any such voting rights, but no such Honorary Member shall be a member within the meaning of Section 5056 or this Section 1.

If the corporation is wound up and dissolved, the members of record at the time a certificate evidencing the corporation's election to wind up and dissolve is filed with the Secretary of State or, if no election to wind up and dissolve is made, at the time an order for winding up and dissolution of the corporation is entered, shall receive the assets of the corporation remaining after (a) return of any assets held upon a valid condition requiring return, transfer, or conveyance, which condition has occurred or will occur; (b) disposition of any assets held in a charitable trust in compliance with the provisions of any trust under which those assets are held; (c) payment, or adequate provision for payment, of all taxes, penalties, debts, and liabilities; and (d) compliance with other provisions of applicable law. Such remaining assets shall be distributed pro rata per membership.

Any person, as defined in Corporations Code Section 5065, and who meets the qualifications set forth in this Section 1, is eligible to be a member of the Corporation, except that, in the case of a natural person, the person will not be eligible for membership unless over the age of 18 years. Any person, eligible for membership and qualified for membership under this Section 1 of these Bylaws, will be admitted to membership only on the approval of the Board of Directors of an application submitted by that person in the form and manner as prescribed by the Board of Directors and the membership fee as specified in Section 3 of this Article II.

Two or more persons or entities eligible to be members shall have indivisible interests in a single membership if they have submitted an application to the Membership Committee and that application has been approved by the Board. When a membership stands of record in the names of two or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, spouses as community property, tenants by the entirety, or otherwise, their acts with respect to voting have the following effect: if only one member votes, that act binds all members; if more than one member vote, the act of the majority so voting binds all members.

Each member shall have the right to vote, as set forth in Section 2 of this Article II, for the election of a director within such member's RMU(s), on a disposition of all or substantially all of the assets of the corporation, on a merger and on dissolution. Members shall also have all rights afforded members under the California Nonprofit Mutual Benefit Corporation Law.

**Section 2. Voting Rights.** Subject to Sections 5, 6 and 13 of this Article II, each member shall be entitled to cast one (1) vote on each matter submitted to a vote of the members. Honorary Members are not entitled to vote on any matter submitted to a vote of the members.

**Section 3. Membership Fee; Periodic Dues; and Assessments.** Each member shall pay a membership fee and periodic dues and assessments in such amounts and at such times as shall be determined resolution of the Board of Directors of the Corporation. Dues are payable for the first year on admission to membership and annually thereafter at the time or times as may be fixed by the Board of Directors. A member, on learning of the amount of dues determined by the Board of Directors and the time or times of payment fixed by the Board of Directors, may avoid liability for the dues by promptly resigning from membership, except if the member is, by contract or otherwise, liable for the dues. The amount of each levy and the method of collection of assessments will be fixed from time to time by resolution of the Board of Directors of the Corporation. Assessments will be made payable at the times or intervals, and on notice, as prescribed by the Board. Any member, on learning of an assessment, may avoid liability for it by promptly resigning from membership, providing that the member is not otherwise liable for the assessment by contract or otherwise.

**Section 4. Transfer of Membership.** The Board may provide for the transfer of memberships, subject to such restrictions or limitations and fees as the Board deems appropriate, including transfer upon the death, dissolution, merger, or reorganization of a member.

**Section 5. Termination of Membership.**

(a) **Causes.** The membership and all rights of membership automatically terminate on the occurrence of any of the following causes:

(1) The voluntary resignation of a member, with notice as prescribed by Section 5(b) of this Article II;

(2) When a membership is issued for a period of time, the expiration of that period;

(3) The death of a member;

(4) The dissolution of corporate members; and

(5) The nonpayment of dues or assessments, subject to the limitations set forth in Section 5(c) of this Article II.

(b) **Resignation by Giving Notice.** The membership of any member of the Corporation shall automatically terminate on such member's written request for such termination delivered to the President or Secretary of the Corporation personally or deposited in United States first class mail, postage prepaid.

(c) **Nonpayment of Dues or Assessments.** The membership of any member who fails to pay his or her dues or assessments within 30 days of the due date automatically terminates at the end of that 30-day period, provided that the member was given (1) 15 days prior written notice of the termination stating the reasons for termination, and (2) a timely opportunity to be heard on the matter of the termination. The notice will be given personally to the member or sent by registered mail to the last address of the member as shown on the records of the Corporation. The opportunity to be heard, at the election of the member, may be oral or in writing, and must occur not less than 5 days before the effective date of the termination. The hearing shall be conducted at 512 Pajaro Street, Salinas, California, by a committee composed of the President and Secretary of the Corporation. The hearing will be presided over by the President of the Corporation who will perform the following duties:

(1) Read the charges against the subject member.

(2) Require that the charges be verified by the testimony of the person or persons making them.

(3) Hear any other witnesses against the subject member.

(4) Allow the subject member to cross-examine each witness following the testimony of that witness.

(5) Allow the subject member to make a statement in his or her own behalf.

(6) Allow the subject member to call witnesses in his or her own behalf.

(7) Allow the members of the committee conducting the hearing to question the witnesses after they have been questioned by the subject member.

The committee conducting the hearing will conduct the hearing in good faith and in a fair and reasonable manner. The committee has the exclusive power and authority to decide that the proposed termination not take place.

(d) **Effect of Termination.** Any and all rights of a member in the Corporation and in its property cease on the termination of membership. However, termination does not relieve the member from any obligation for charges incurred, services or benefits actually rendered, dues, assessments, or fees, or arising from contract or otherwise. The Corporation retains the right to enforce any obligation or obtain damages for its breach.

**Section 6. Good Standing.** Any member who shall fail to pay any installment of fees, periodic dues, or assessments for more than thirty (30) days after their due date shall not be in good standing and shall not be entitled to vote as a member.

**Section 7. Place of Meetings.** Meetings of members shall be held either at the principal office of the corporation or at any other place within or without the State of California that is designated either by the Board or by the written consent of all persons entitled to vote at the meeting, given either before or after the meeting and filed with the Secretary. If authorized by the Board in its sole discretion and subject to the requirement of consent in Corporations Code Section 20(b) and guidelines and procedures that the Board may adopt, members not physically present in person (or, if proxies are allowed, by proxy) at a meeting of members may, by electronic transmission by and to the corporation as provided in Corporations Code Sections 20 and 21 or by electronic video screen communication, participate in a meeting of members, be deemed present in person (or, if proxies are allowed, by proxy) and vote at a meeting of members, whether that meeting is to be held at a designated place or in whole or in part by means of electronic transmission by and to the corporation or by electronic video screen communication, in accordance with the following paragraph.

A meeting of members may be conducted, in whole or in part, by electronic transmission by and to the corporation or by electronic video screen communication. If a meeting is so held: (a) the corporation shall implement reasonable measures to provide members in person (or, if proxies are allowed, by proxy) a reasonable opportunity to participate in the meeting and to vote on matters submitted to the members, including an opportunity to read or hear the proceedings of the meeting substantially concurrently with those proceedings, and (b) if any member votes or takes other action at the meeting by means of electronic transmission to the corporation or electronic video screen communication, a record of that vote or action shall be maintained by the corporation. Any requests by the corporation to a member pursuant to clause (b) of Corporations Code Section 20 for consent to conduct a meeting of members by electronic transmission by and to the corporation, shall include a notice that absent consent of the member pursuant to Corporations Code Section 20(b), the meeting shall be held at a physical location in accordance with the first paragraph of this Section 7.

Guidelines and procedures adopted by the board referred to above shall include appropriate safeguards and restrictions of the kinds required by Corporations Code §§ 20 and 21, including appropriate passwords or other means of identification of members for purposes of transmissions to and by them.

**Section 8. Annual Meetings.** Annual meetings of members shall be held on a date and at a time which shall be fixed by the Board. In any year in which directors are elected by members, the election shall be held at the annual meeting. Any other proper business may be transacted at the meeting.

**Section 9. Special Meetings.** Special meetings of members may be called for any lawful purpose at any time by the Board, the Chairman of the Board, the President, not less than 5 percent of the members, or. Upon request in writing to the corporation addressed to the attention of the Chairman of the Board, the President, any Vice President, or the Secretary by any person(s) (other than the Board) entitled to call a special meeting of members, the officer forthwith shall cause notice to be given to the members entitled to vote that a meeting will be held at a time fixed by the Board, not less than 35 nor more than 90 days after the receipt of the request. If the notice is not given within 20 days after receipt of the request, the person(s) entitled to call the meeting may give the notice.

**Section 10. Notice of Annual or Special Meetings.** Written notice of each annual or special meeting of members shall be given not less than 10 or more than 90 days before the date of the meeting to each member entitled to notice of it; provided, however, that if notice is given by mail and is not mailed by first-class, registered, or certified mail, the notice shall be given not less than 20 days before the meeting. The notice shall state the place, date and hour of the meeting, the means of electronic transmission by and to the corporation or electronic video screen communication, if any, by which members may participate in the meeting, and (a) in the case of a special meeting, the general nature of the business to be transacted, and no other business may be transacted, or (b) in the case of the annual meeting, those matters which the Board, at the time of the mailing of the notice, intends to present for action by the members, but, subject to the provisions of applicable law, any proper matter may be presented at the meeting for action by the members. The notice of any meeting at which directors are to be elected shall include the names of all those who are nominees at the time the notice is sent to members.

Any approval of the members, other than unanimous approval by those entitled to vote, under the following sections of the California Corporations Code shall be valid only if the general nature of the proposal so approved was stated in the notice of meeting or in any written waiver of notice:

- (a) Corp. Code § 7222: removal of directors or reduction in number of directors;
- (b) Corp. Code § 7224: filling vacancies on the board resulting from removal by members;
- (c) Corp. Code § 7233: contracts in which a director has a material financial interest;
- (d) Corp. Code § 7812: certain amendments of the articles of incorporation;
- (e) Corp. Code § 8610: election to wind up and dissolve; and
- (f) Corp. Code § 8719: certain distributions during winding up other than cash to a class of members.

Notice of a members' meeting shall be given either personally, (subject to the provisions and requirements of the last paragraph of Section 7 of this Article II) by electronic transmission by the corporation, or by mail or by other means of written communication, addressed to a member at the address of the member appearing on the books of the corporation or given by the member to the corporation for the purpose of notice, or, if no such address appears or is given, at the place where the principal office of the corporation is located or by publication at least once in a newspaper of general circulation in the county in which the principal office is located. Notice by mail shall be deemed to have been given at the time a written notice is deposited in the United States mails, postage prepaid. Any other written notice shall be deemed to have been given at the time it is personally delivered to the recipient or is delivered to a common carrier for transmission, or actually transmitted by the person giving the notice by electronic means, to the recipient. Oral notice shall be deemed to have been given at the time it is communicated, in person or by telephone or wireless, to the recipient or to a person at the office of the recipient who the person giving the notice has reason to believe will promptly communicate it to the recipient.

If any notice or report addressed to a member at the address of the member appearing on the books of the corporation is returned to the corporation by the United States Postal Service marked to indicate that the United States Postal Service is unable to deliver the notice or report to the member at that address, all future notices or reports shall be deemed to have been duly given without further mailing if the notice or report shall be available for the member upon written demand at the principal office of the corporation for a period of one year from the date of the giving of the notice or report to all other members.

Notice given by electronic transmission by the corporation as provided above shall be valid only if it complies with Corporations Code Section 20. Further, notwithstanding the foregoing, notice shall not be given by electronic transmission by the corporation as provided in this section after either of the following: (a) the corporation is unable to deliver two consecutive notices to the member by that means; or (b) the inability to so deliver the notice to the member becomes known to the secretary, any assistant secretary, the transfer agent or any other person responsible for giving the notice.

**Section 11. Quorum.** A majority of the voting power, represented at the meeting in person or by proxy, shall constitute a quorum at any meeting of members. If a quorum is present, the affirmative vote of the majority of the voting power represented at the meeting, entitled to vote and voting on any matter, shall be the act of the members, unless the vote of a greater number or voting by class is required by law, by the Articles, or by these Bylaws, except as provided in the following sentence. The members present at a duly called or held meeting at which a quorum is present may continue to do business until adjournment, notwithstanding the withdrawal of enough members to leave less than a quorum, if any action taken (other than adjournment) is approved by at least a majority of the members required to constitute a quorum or by such greater number, if any, required by the Nonprofit Mutual Benefit Corporation Law, the Articles or these Bylaws.

**Section 12. Adjourned Meetings and Notice Thereof.** Any members' meeting, whether or not a quorum is present, may be adjourned from time to time by the vote of a majority of the votes represented at the meeting in person or by proxy, but in the absence of a quorum (except as provided in Section 11 of this Article II) no other business may be transacted at the meeting. No meeting may be adjourned for more than 45 days.

It shall not be necessary to give any notice of the adjourned meeting or of the business to be transacted at it, other than by announcement at the meeting at which the adjournment is taken of the time and place of the adjourned meeting (or the means of electronic transmission by and to the corporation or electronic video screen communication, if any, by which members may participate). If, however, after adjournment, a new

record date is fixed for notice or voting, a notice of the adjourned meeting shall be given to each member who, on the record date for notice of the adjourned meeting, is entitled to vote at the meeting, as in the case of the meeting as originally called.

**Section 13. Voting.** The only members entitled to notice of any meeting or to vote at any meeting shall be persons in whose name memberships stand on the records of the corporation on the record date or dates determined in accordance with Section 14 of this Article II. In the election of directors, a member shall be entitled to cast one (1) vote for a director in each RMU that such member is the owner or operator of riverine land located within such RMU. In all other matters, each member shall be entitled to cast one (1) vote on each matter submitted to a vote of the members.

Elections need not be by ballot; provided, however, that an election of directors must be by ballot if demanded by a member at the meeting before the voting begins.

In any election of directors, the candidate receiving the highest number of votes in an RMU is elected as the director of such RMU.

If a membership stands of record in the names of two or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, husband and wife as community property, tenants by the entirety, voting trustees, persons entitled to vote under a voting agreement or otherwise, or if two or more persons (including proxy holders) have the same fiduciary relationship respecting the same membership, unless the Secretary of the corporation is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect:

- (a) If only one votes, that act binds all; or
- (b) If more than one vote, the act of the majority so voting binds all.

Voting shall in all cases be subject to the provisions of Chapter 6 of the California Nonprofit Mutual Benefit Corporation Law.

**Section 14. Record Date.** The Board may fix, in advance, a record date for the determination of the members entitled to notice of any meeting of members or entitled to exercise any rights in respect of any lawful action. The record date so fixed shall be not more than 60 days nor less than 10 days before the date of the meeting, nor more than 60 days prior before any other action. When a record date is so fixed, only members of record on that date are entitled to notice, to vote, or to exercise the rights for which the record date was fixed. A determination of members of record entitled to notice of a meeting of members shall apply to any adjournment of the meeting unless the Board fixes a new record date for the adjourned meeting. The Board shall fix a new record date if the meeting is adjourned for more than thirty (30) days.

If no record date is fixed by the Board, the record date for determining members entitled to notice of a meeting of members shall be at the close of business on the business day next preceding the day on which notice is given or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held. If no record date is fixed by the Board, members on the day of the meeting who are otherwise eligible to vote are entitled to vote at the meeting of members or, in case of an adjourned meeting, members on the day of the adjourned meeting who are otherwise eligible to vote are entitled to vote at the adjourned meeting of members. The record date for determining members for any purpose other than set forth in this Section 14 or Section 10 of this Article II shall be at the close of business on the day

on which the Board adopts the resolution relating thereto, or the sixtieth day before the date of such other action, whichever is later.

**Section 15. Consent of Absentees.** The transactions of any meeting of members, however called and noticed, and wherever held, are as valid as though had at a meeting duly held after regular call and notice, if a quorum is present in person or by proxy, and if, either before or after the meeting, each of the persons entitled to vote who was not present in person or by proxy, provides a waiver of notice or a consent to the holding of the meeting or an approval of the minutes of the meeting in writing. All such waivers, consents, and approvals shall be filed with the corporate records or made a part of the minutes of the meeting. Attendance of a person at a meeting shall constitute a waiver of notice of and presence at the meeting, except when the person objects, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened and except that attendance at a meeting is not a waiver of any right to object to the consideration of matters required by the California Nonprofit Mutual Benefit Corporation Law to be included in the notice but not so included, if the objection is expressly made at the meeting. Neither the business to be transacted at nor the purpose of any regular or special meeting of members need be specified in any written waiver of notice, consent to the holding of the meeting, or approval of the minutes of the meeting, except as provided in Section 7511(f) of the California Nonprofit Mutual Benefit Corporation Law.

**Section 16. Action Without Meeting.** Subject to Sections 7511, 7513, and 7514 of the California Nonprofit Mutual Benefit Corporation Law, any action except election of directors that, under any provision of the California Nonprofit Mutual Benefit Corporation Law, may be taken at any regular or special meeting of members, may be taken without a meeting if (a) the written ballot of every member is solicited by the corporation in conformity with those Code sections, (b) the number of ballots cast within the time period specified equals or exceeds the quorum required to be present at a meeting authorizing the action, and (c) the number of approvals equals or exceeds the number of votes that would be required to approve at a meeting at which the total number of votes cast was the same as the number of votes cast by ballot. Unless a record date for voting purposes is fixed as provided in Section 14 of this Article II, the record date for determining members entitled to cast written ballots pursuant to this Section 16, when no prior action by the Board has been taken, shall be the day on which the first written ballot is mailed or solicited; whichever is first. If approved by the board of directors, written ballots and any related material may be sent by electronic transmission by the corporation and responses may be returned by electronic transmission to the corporation as those terms are used and subject to the applicable provisions of Section 7 of this Article II.

Alternatively, any action required or permitted to be taken by the members may be taken without a meeting, if all members individually or collectively consent in writing (including by electronic transmission to the corporation) to the action. The written consent or consents shall be filed with the minutes of the proceedings of the members.

**Section 17. Proxies.** Every person entitled to vote a membership has the right to do so either in person or by one or more persons authorized by a written proxy executed by the member and filed with the Secretary. Except as otherwise provided in Corporations Code Section 7613, a duly executed proxy is not revoked and continues in full force and effect in accordance with its terms until revoked by the person executing it before the vote pursuant thereto. A proxy may be revoked either (a) by a writing delivered to the Secretary of the corporation stating that the proxy is revoked, (b) by a subsequent proxy executed by the person executing the prior proxy and presented to the meeting, or (c) as to any meeting, by attendance at the meeting and voting in person by the person executing the proxy; but no proxy shall be valid after the expiration of 11 months from the date of its execution unless it otherwise provides and except that the maximum term of any proxy shall be three years from its date of execution. The dates contained on proxies

presented to a meeting presumptively determine the order of their execution, regardless of postmark dates on envelopes in which they may have been mailed, but if there is no date on a proxy, the postmark date on the envelope in which it was mailed shall be presumed in the absence of information to the contrary to be the date of execution of the proxy.

**Section 18. Inspectors of Election.** In advance of any meeting of members, the Board may appoint inspectors of election to act at the meeting and any adjournment of it. If inspectors of election are not appointed in advance of a meeting, or if any persons so appointed fail to appear or refuse to act, the presiding officer of the meeting may, and on the request of any member or member's proxy shall, make such appointment at the meeting. The number of inspectors shall be either one or three. If appointed at a meeting on the request of one or more members or proxies, the majority of members represented in person or by proxy shall determine whether one or three inspectors are to be appointed. In the case of any action by written ballot without a meeting as provided for in Section 16 of this Article II, the Board may also appoint inspectors of election.

Whether the election is at a meeting or by written ballot without a meeting, the powers and duties of the inspectors shall be as prescribed by Section 7614(b) of the California Nonprofit Mutual Benefit Corporation Law and shall include: determining the number of memberships outstanding and the voting power of each; determining the memberships represented at the meeting (or consenting); determining the existence of a quorum; determining the authenticity, validity, and effect of proxies (if proxies are allowed); receiving votes, ballots, or consents; hearing and determining all challenges and questions in any way arising in connection with the right to vote; counting and tabulating all votes or consents; determining when the polls shall close; determining the result; and doing such acts as may be proper to conduct the election or vote with fairness to all members. If there are three inspectors of election, the decision, act, or certificate of a majority is effective in all respects as the decision, act, or certificate of all.

**Section 19. Conduct of Meeting.** The President shall be the Presiding Officer at all meetings of the members. The Presiding Officer shall conduct each meeting in a businesslike and fair manner, but shall not be obligated to follow any technical, formal, or parliamentary rules or principles of procedure. The Presiding Officer's rulings on procedural matters shall be conclusive and binding on all members, unless at the time of a ruling a request for a vote on the ruling is made to the members entitled to vote and which are represented in person or by proxy (if proxies are allowed) at the meeting, in which case the decision of a majority of the voting power represented at the meeting shall be conclusive and binding on all members. Without limiting the generality of the foregoing, the Presiding Officer shall have all of the powers usually vested in the chair of a meeting of members.

**Section 20. Number of Members.** There is no limit on the number of members that the Corporation may admit. There is no limit on the number of Honorary Members that the Corporation may admit.

**Section 21. Membership Book.** The Corporation shall keep a membership book containing the name, address, and class of each member in written form. The book must also note if a membership has terminated and the date on which that membership ceased. The book will be kept at the principal office of the Corporation and is subject to the rights of inspection required by law and as set forth in these Bylaws.

### ARTICLE III DIRECTORS

**Section 1. Powers.** Subject to limitations of the Articles, of these Bylaws, and of the California Nonprofit Mutual Benefit Corporation Law relating to action required to be approved by the members or by a majority of members, the activities and affairs of the corporation shall be conducted and all corporate powers shall be exercised by or under the direction of the Board. The Board may delegate the management of the activities of the corporation to any person or persons, a management company, or committees however composed, provided that the activities and affairs of the corporation shall be managed and all corporate powers shall be exercised under the ultimate direction of the Board. Without prejudice to these general powers, but subject to the provisions just stated, the Board shall have the following powers in addition to the other powers enumerated in these Bylaws:

- (a) To select and remove all the other officers, agents, and employees of the corporation, prescribe qualifications, powers, and duties for them that are not inconsistent with law, the Articles, or these Bylaws, fix their compensation, and require from them security or otherwise provide for faithful service.
- (b) To conduct, manage, and control the affairs and activities of the corporation and to make rules and regulations therefor not inconsistent with law, the Articles, or these Bylaws, as they may deem best.
- (c) To adopt and use a corporate seal, to prescribe the forms of certificates of membership if certificates are to be issued and to alter their respective forms from time to time as the Board may deem best.
- (d) To authorize the issuance of memberships of the corporation from time to time.
- (e) To borrow money and incur indebtedness for the purposes of the corporation, and to cause to be executed and delivered therefor, in the corporate name, promissory notes, bonds, debentures, deeds of trust, mortgages, pledges, hypothecations, or other evidences of debt and securities for debt.
- (f) To carry on a business at a profit and apply any profit that results from the business activity to any activity in which it may lawfully engage.

**Section 2. Number of Directors.** The authorized number of directors shall be not less than three (3) nor more than seven (7) until changed by amendment of the Articles or by a Bylaw duly adopted by approval of the members. The exact authorized number of directors, within those limits, shall be as stated in the next sentence as duly amended from time to time. The exact authorized number of directors shall be seven (7) until changed as provided in this Section 2. There shall be only one (1) director per RMU.

**Section 3. Election and Term of Office.** Directors shall be elected at the annual meeting of the members, but if an annual meeting is not held, or the directors are not elected at an annual meeting of members, the directors may be elected at any special meeting of members held for that purpose. Each director shall serve for a term of two (2) years and until a successor has been elected and qualified.

**Section 4. Vacancies.** Any director may resign effective upon giving written notice to the Chairman of the Board, the President, the Secretary, or the Board, unless the notice specifies a later time for the effectiveness of the resignation. If the resignation is effective at a future time, a successor may be selected before that time, to take office when the resignation becomes effective.

Vacancies in the Board, except those existing as a result of removal of elected directors may be filled by approval of the Board, or, if the number of directors then in office is less than a quorum, by the unanimous written consent of the directors then in office, by the affirmative vote of a majority of directors then in office at a meeting held pursuant to notice or waivers of notice, or by a sole remaining director.

A vacancy or vacancies in the Board shall be deemed to exist if a director dies, resigns or is removed, or if the authorized number of directors is increased, or if the members fail, at any regular or special meeting of members at which any director or directors are or are to be elected, to elect the full authorized number of directors to be voted for at that meeting.

The Board may declare vacant the office of a director who has been declared of unsound mind by a final order of court, convicted of a felony, or been found by a final order or judgment of any court to have breached any duty arising under Section 7238 of the California Nonprofit Mutual Benefit Corporation Law.

The members may elect a director or directors at any time to fill any vacancy or vacancies not filled by the directors except vacancies in designated or ex officio directorships, if any.

No reduction of the authorized number of directors shall remove any director before expiration of the director's terms of office.

**Section 5. Place of Meeting.** Regular or special meetings of the Board shall be held at any place within or without the State of California designated from time to time by the Board. In the absence of designation by the Board, regular meetings shall be held at the principal office of the corporation.

**Section 6. Regular Meetings.** Immediately following each annual meeting of members the Board shall hold a regular meeting for the purpose of organization, election of officers, and the transaction of other business.

Other regular meetings of the Board shall be held without call or notice on dates and at times fixed by the Board.

**Section 7. Special Meetings.** Special meetings of the Board for any purpose or purposes may be called at any time by the Chairman of the Board, the President, any Vice President, the Secretary, or any two directors.

Special meetings of the Board shall be held upon four (4) days' notice by first-class mail or forty-eight (48) hours' notice given personally by telephone, (including a voice messaging system or other system or technology designed to record and communicate messages) or by electronic transmission by the corporation as provided by Corporations Code § 20) or other system or technology designed to record and communicate messages, telegraph, facsimile, electronic mail, or other electronic means. Any such notice shall be addressed or delivered to each director at the director's address as shown on the records of the corporation or as may have been given to the corporation by the director for purposes of notice or, if the director's address is not shown on the corporation's records or is not readily ascertainable, at the place where the meetings of the directors are regularly held.

Notice by mail shall be deemed to have been given at the time a written notice is deposited in the United States mails, postage prepaid. Any other written notice shall be deemed to have been given at the time it is personally delivered to the recipient or is delivered to a common carrier for transmission, or actually transmitted by the person giving the notice by electronic means, to the recipient. Oral notice shall be deemed

to have been given at the time it is communicated, in person or by telephone or wireless, to the recipient or to a person at the office of the recipient who the person giving the notice has reason to believe will promptly communicate it to the recipient.

**Section 8. Quorum.** A majority of the authorized number of directors constitutes a quorum of the Board for the transaction of business, except to adjourn as provided in Section 11 of this Article III. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present is the act of the Board, unless a greater number is required by law or by the Articles or these Bylaws, except as provided in the next sentence. A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting or by such greater number, if any, required by the Nonprofit Mutual Benefit Corporation Law, the Articles or these Bylaws.

**Section 9. Participation in Meetings by Conference Telephone and Electronic Transmission.** Members of the Board may participate in a directors' meeting through use of conference telephone, electronic video screen communication or electronic transmission by and to the corporation in accordance with Corporations Code Sections 20 and 21. Participation in a directors' meeting through use of conference telephone or electronic video screen communication constitutes presence in person at that meeting as long as all members participating in the meeting are able to hear one another. Participation in a meeting through the use of electronic transmission by and to the corporation (other than conference telephone and electronic video screen communication) constitutes presence in person at that meeting if all of the following apply:

- (a) Each member participating in the meeting can communicate with all of the other participating members concurrently; and
- (b) Each member is provided the means of participating in all matters before the board including, without limitation, the capacity to propose, or to interpose an objection to, a specific action to be taken by the corporation; and
- (c) The corporation adopts and implements some means of verifying both of the following:
  - (i) A person participating in the meeting is a director or other person entitled to participate in the board meeting and
  - (ii) All actions of, or votes by, the board are taken or cast only by the directors and not by persons who are not directors.

**Section 10. Waiver of Notice.** Notice of a meeting need not be given to any director who provides a waiver of notice to holding the meeting or an approval of its minutes in writing, whether before or after the meeting, or who attends the meeting without protesting, prior before or at its commencement, the lack of notice to that director. All the waivers, consents, and approvals as to a Board meeting shall be filed with the corporate records or made a part of the minutes of the meeting.

**Section 11. Adjournment.** A majority of the directors present, whether or not a quorum is present, may adjourn any Board meeting to another time and place. Notice of the time and place of holding an adjourned meeting need not be given to absent directors if the time and place is fixed at the meeting adjourned, except as provided in the next sentence. If the meeting is adjourned for more than twenty-four (24) hours, notice

of any adjournment to another time or place shall be given before the time of the adjourned meeting to the directors who were not present at the time of the adjournment.

**Section 12. Action Without Meeting.** Any action required or permitted to be taken by the Board may be taken without a meeting if all directors individually or collectively consent in writing to the action. The consent or consents shall have the same effect as a unanimous vote of the Board and shall be filed with the minutes of the proceedings of the Board.

**Section 13. Rights of Inspection.** Every director shall have the absolute right at any reasonable time to inspect and copy all books, records, and documents of every kind and to inspect the physical properties of the corporation.

**Section 14. Committees.** The Board may appoint one or more committees, each consisting of two or more directors, and delegate to such committees any of the authority of the Board except authority to:

- (a) Approve any action for which the California Nonprofit Mutual Benefit Corporation Law also requires approval of the members or approval of a majority of all members;
- (b) Fill vacancies on the Board or on any committee;
- (c) Fix compensation of directors for serving on the Board or on any committee;
- (d) Amend or repeal bylaws or adopt new bylaws;
- (e) Amend or repeal any resolution of the Board which by its express terms is not so amendable or repealable;
- (f) Appoint other committees of the Board or members of other committees;
- (g) Expend corporate funds to support a nominee for director after there are more people nominated for director than can be elected; or
- (h) As to any assets held in charitable trust, approve any self-dealing transaction as defined in Section 5233(a) of the California Corporations Code except as provided in Corporations Code Section 5233(d)(3).

Any committee to which any authority of the Board is delegated may only be created, and its members appointed, by resolution adopted by a majority of the authorized number of directors then in office, provided a quorum is present. Any such committee may be designated an Executive Committee or given another name as the Board shall specify. The Board may appoint, in the same manner, alternate members of any committee who may replace any absent member at any meeting of the committee. The Board shall have the power to prescribe the manner in which proceedings of these committees shall be conducted. In the absence of prescription by the Board, a committee shall have the power to prescribe the manner in which its proceedings shall be conducted. Unless the Board or a committee shall otherwise provide, the regular and special meetings and other actions of that committee shall be governed by the provisions of this Article III applicable to meeting and actions of the Board. Minutes shall be kept of each meeting of each committee.

Section 15. **Fees and Compensation.** Directors and members of committees may receive such compensation, if any, for their services, and such reimbursement for expenses, as may be fixed or determined by the Board.

#### **ARTICLE IV OFFICERS**

Section 1. **Officers.** The officers of the corporation shall be a President, a Secretary and a Treasurer. The corporation may also have, at the discretion of the Board, a Chairman of the Board, one or more Vice Presidents, one or more Assistant Secretaries, one or more Assistant Treasurers, and such other officers as may be elected or appointed in accordance with the provisions of Section 3 of this Article IV. Any number of offices may be held by the same person unless the Articles or these Bylaws provide otherwise.

Section 2. **Election.** Each officer of the corporation, except officers elected or appointed in accordance with the provisions of Section 3 or Section 5 of this Article IV, shall be chosen annually by, and shall serve at the pleasure of, the Board, and shall hold office until resignation, removal, or other disqualification from service, or until his or her successor shall be elected.

Section 3. **Subordinate Officers.** The Board may elect, and may empower the President to appoint, such other officers as the business of the corporation may require. Each such officer shall hold office for the period, have authority and perform duties as provided in these **Bylaws** or as the Board or the appointing officer may from time to time determine.

Section 4. **Removal and Resignation.** Any officer may be removed, either with or without cause, by the Board at any time or, except in the case of an officer chosen by the Board, by any officer upon whom such power of removal may be conferred by the Board. Any removal of an officer shall be without prejudice to his or her rights, if any, under any contract of employment.

Any officer may resign at any time by giving written notice to the corporation addressed and sent to the Board, the President, or the Secretary, but without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party. Any officer's resignation shall take effect on the date the resignation is received by the addressee or at any later time specified in the resignation and, unless otherwise specified in the resignation, the acceptance of the resignation shall not be necessary to make it effective.

Section 5. **Vacancies.** A vacancy in any office because of death, resignation, removal, disqualification, or any other cause shall be filled in the manner prescribed in these Bylaws for regular election or appointment to that office, provided that vacancies may be filled as they occur and not on an annual basis.

Section 6. **Chairman of the Board.** The Chairman of the Board, if there shall be such an officer, shall, if present, preside at all meetings of the Board and exercise and perform other powers and duties assigned by the Board.

Section 7. **President.** Subject to powers, if any, given by the Board to the Chairman of the Board, if there be such an officer, the President is the general manager and chief executive officer of the corporation and has, subject to the control of the Board, general supervision, direction, and control of the business and officers of the corporation. The President shall preside at all meetings of the members and, in the absence of the Chairman of the Board, or if there be none, at all meetings of the Board. The President has the general powers and duties of management usually vested in the office of president and general manager of a corporation and other powers and duties prescribed by the Board.

Section 8. **Vice Presidents.** In the absence or disability of the President, the Vice Presidents, if any be appointed, in order of their rank as fixed by the Board or, if not ranked, the Vice President designated by the Board, shall perform all the duties of the President. A Vice President so acting shall have all the powers of, and be subject to all the restrictions upon, the President. The Vice Presidents shall have other powers and perform other duties respectively prescribed for them by the Board.

Section 9. **Secretary.** The Secretary shall keep or cause to be kept, at the principal office or other place ordered by the Board, a book of minutes of all meetings of members, the Board, and its committees, with the time and place of holding, whether regular or special, and if special, how authorized, the notice given of the meeting, the names of those present at Board and committee meetings, the number of members present or represented at members' meetings, and the proceedings of the meetings. The Secretary shall keep, or cause to be kept, at the principal office in the State of California the original or a copy of the corporation's Articles and Bylaws, as amended to date.

The Secretary shall give, or cause to be given, notice of all meetings of the members and of the Board and any committees of the Board required by these Bylaws or by law to be given, shall keep the seal of the corporation in safe custody, and shall have other powers and perform other duties as prescribed by the Board.

Section 10. **Treasurer.** The Treasurer is the chief financial officer of the corporation and shall keep and maintain, or cause to be kept and maintained, adequate and correct accounts of the properties and business or financial transactions of the corporation, and shall send or cause to be sent to the members of the corporation financial statements and reports as law or these Bylaws require to be sent to them. The books of account shall at all times be open to inspection by any director.

The Treasurer shall deposit all moneys and other valuables in the name and to the credit of the corporation with depositaries designated by the Board. The Treasurer shall disburse the funds of the corporation as ordered by the Board, shall render to the President and the directors, whenever they request it, an account of all transactions as Treasurer and of the financial condition of the corporation, and shall have other powers and perform other duties prescribed by the Board.

## ARTICLE V OTHER PROVISIONS

Section 1. **Inspection of Corporate Records.** Subject to Sections 8330, 8331, and 8332 of the California Nonprofit Mutual Benefit Corporation Law, a member may do either or both of the following for a purpose reasonably related to the member's interest as a member:

- (a) Inspect and copy the record of all the members' names, addresses, and voting rights, at reasonable times, upon five business days' prior written demand upon the corporation, which demand shall state the purpose for which the inspection is requested; or

- (b) Obtain from the Secretary of the corporation, upon written demand and tender of a reasonable charge, a list of the names, addresses, and voting rights of those members entitled to vote for the election of directors, as of the most recent record date for which it has been compiled or as of a date specified by the member subsequent to the date of demand. The demand shall state the purpose for which the list is requested. The Secretary shall make the membership list available on or before the later of 10 business days after the demand is received or after the date specified therein as the date as of which the list is to be compiled.

The corporation may, within 10 business days after receiving a demand, as set forth above in paragraph (a) or (b) of this Section 1, deliver to the person(s) making the demand a written offer of an alternative method of achieving the purpose identified in the demand without providing access to or a copy of the membership list. Any rejection of the corporation's offer shall be in writing and shall indicate the reasons the alternative proposed by the corporation does not meet the proper purpose of the demand made pursuant to paragraph (a) or (b) of this Section 1.

The accounting books and records and minutes of proceedings of the members and the Board and committees of the Board shall be open to inspection upon written demand on the corporation of any member at any reasonable time for a purpose reasonably related to the member's interests as a member.

**Section 2. Inspection of Articles and Bylaws.** The corporation shall keep in its principal office in the State of California the original or a copy of its Articles and of these Bylaws as amended to date, which shall be open to inspection by members at all reasonable times during office hours. If the corporation has no office in the State of California, it shall upon the written request of any member furnish to that member a copy of the Articles or Bylaws as amended to date.

**Section 3. Endorsement of Documents; Contracts.** Subject to the provisions of applicable law, any note, mortgage, evidence of indebtedness, contract, conveyance, or other instrument in writing and any assignment or endorsement thereof executed or entered into between the corporation and any other person, when signed by any one of the Chairman of the Board, the President or any Vice President, and by a second person who is the Secretary, an Assistant Secretary, the Treasurer or an Assistant Treasurer of the corporation shall be valid and binding on the corporation in the absence of actual knowledge on the part of the other person that the signing officers had no authority to execute the same. Any such instruments may also be signed by any other person or persons in the manner from time to time determined by the Board. Unless so authorized by the Board, no officer, agent, or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or amount.

**Section 4. Membership Certificates.** Subject to the provisions of Section 7313 of the California Nonprofit Mutual Benefit Corporation Law, every member of the corporation shall be entitled to a certificate signed in the name of the corporation by any one of the Chairman of the Board, the President or a Vice President, and by a second person who is the Treasurer an Assistant Treasurer, the Secretary or an Assistant Secretary, certifying the fact of membership and the class of membership owned by the member. Any or all of the signatures on the certificate may be facsimiles. If any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be an officer, transfer agent, or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if that person were an officer, transfer agent, or registrar at the date of issue.

Except as provided in this section, no new certificate for membership shall be issued in place of an old one unless the old one is surrendered and cancelled at the same time. The Board may, however, if any certificate for membership is alleged to have been lost, stolen, or destroyed, authorize the issuance of a new certificate in place of the old one, and the corporation may require that the corporation be given a bond (or other adequate security) sufficient to indemnify it against any claim that may be made against it (including expense or liability) on account of the alleged loss, theft, or destruction of the old certificate or the issuance of a new certificate.

**Section 5. Representation of Shares of Other Corporations.** The President or any other officer or officers authorized by the Board or the President are each authorized to vote, represent, and exercise on behalf of the corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of the corporation. The authority granted in this Section may be exercised either by any such officer in person or by any other person authorized so to do by proxy or power of attorney duly executed by that officer.

**Section 6. Construction and Definitions.** Unless the context otherwise requires, the general provisions, rules of construction, and definitions contained in the General Provisions of the California Nonprofit Corporation Law and in the California Nonprofit Mutual Benefit Corporation Law shall govern the construction of these Bylaws.

**Section 7. Amendments.** These Bylaws may be amended or repealed by approval of the members or by approval of the Board; provided, however, that members must approve any action that would: (a) materially and adversely affect the rights of members as to voting, dissolution, or redemption, or transfer of memberships; (b) increase or decrease the number of memberships authorized in total or for any class; (c) effect an exchange, reclassification, or cancellation of all or any part of the memberships (other than within the maximum and minimum of a variable board); (d) authorize a new class of membership; or (e) specify or change a fixed number of directors or the maximum or minimum number of directors or change from a fixed to a variable number of directors or vice versa. The power of members to approve the repeal or amendment of Bylaws is subject to the further approval of the members of a class if that action would: (a) materially and adversely affect the rights, privilege, preferences, restrictions, or conditions of that class as to voting, dissolution, redemption, or transfer of memberships in a manner different than that action affects another class; (b) materially and adversely affect that class as to voting, dissolution, redemption, or transfer of memberships by changing the rights, privileges, preferences, restrictions, or conditions of another class; (c) increase or decrease the number of memberships authorized for that class; (d) increase the number of memberships authorized for another class; (e) effect an exchange, reclassification, or cancellation of all or part of the memberships of that class; or (f) authorize a new class of memberships.

A Bylaw conferring some or all of the rights of a member of any class upon any person or entity who does not have the right to vote on any of the matters set forth in Section 1 of Article II may be adopted only by approval of the members.

## ARTICLE VI INDEMNIFICATION

**Section 1. Definitions.** For the purposes of this Article VI, "agent" means any person who is or was a director, officer, employee, or other agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee, or agent of another foreign or domestic corporation, partnership, joint venture, trust, or other enterprise, or was a director, officer, employee, or agent of a foreign

or domestic corporation which was a predecessor corporation of the corporation or of another enterprise at the request of that predecessor corporation; "proceeding" means any threatened, pending, or completed action or proceeding, whether civil, criminal, administrative, or investigative; and "expenses" includes without limitation attorneys' fees and any expenses of establishing a right to indemnification under Section 4 or 5(c) of this Article VI.

**Section 2. Indemnification in Actions by Third Parties.** The corporation shall have power to indemnify any person who was or is a party or is threatened to be made a party to any proceeding (other than an action by or in the right of the corporation to procure a judgment in its favor, an action brought under Section 5233 of the California Nonprofit Public Benefit Corporation Law (made applicable pursuant to Section 7238 of that Law), or an action brought by the Attorney General or a person granted relator status by the Attorney General for any breach of duty relating to assets held in charitable trust) by reason of the fact that that person is or was an agent of the corporation, against expenses, judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with such proceeding if the person acted in good faith and in a manner the person reasonably believed to be in the best interests of the corporation and, in the case of a criminal proceeding, had no reasonable cause to believe the conduct of such person was unlawful. The termination of any proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in the best interests of the corporation or that the person had reasonable cause to believe that the person's conduct was unlawful.

**Section 3. Indemnification in Actions by or in the Right of the Corporation.** The corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action by or in the right of the corporation, or brought under Section 5233 of the California Nonprofit Public Benefit Corporation Law (made applicable pursuant Section 7238 of that Law) or brought by the Attorney General or a person granted relator status by the Attorney General for breach of duty relating to assets held in charitable trust, to procure a judgment in its favor by reason of the fact that that person is or was an agent of the corporation, against expenses actually and reasonably incurred by such person in connection with the defense or settlement of such action if the person acted in good faith, in a manner the person believed to be in the best interests of the corporation and with such care, including reasonable inquiry, as an ordinarily prudent person in a like position would use under similar circumstances. No indemnification shall be made under this Section 3:

- (a) In respect of any claim, issue, or matter as to which the person shall have been adjudged to be liable to the corporation in the performance of the person's duty to the corporation, unless and only to the extent that the court in which such proceeding is or was pending shall determine upon application that, in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for the expenses which the court shall determine;
- (b) Of amounts paid in settling or otherwise disposing of a threatened or pending action, with or without court approval; or
- (c) Of expenses incurred in defending a threatened or pending action that is settled or otherwise disposed of without court approval, unless the action concerns assets held in charitable trust and is settled with the approval of the Attorney General.

**Section 4. Indemnification Against Expenses.** To the extent that an agent of the corporation has been successful on the merits in defense of any proceeding referred to in Section 2 or 3 of this Article VI or in

defense of any claim, issue, or matter therein, the agent shall be indemnified against expenses actually and reasonably incurred by the agent in connection therewith.

**Section 5. Required Determinations.** Except as provided in Section 4 of this Article VI, any indemnification under this Article VI shall be made by the corporation only if authorized in the specific case, upon a determination that indemnification of the agent is proper in the circumstances because the agent has met the applicable standard of conduct set forth in Section 2 or 3 of this Article VI, by:

- (a) A majority vote of a quorum consisting of directors who are not parties to the proceeding;
- (b) Approval of the members, with the persons to be indemnified not being entitled to vote thereon; or
- (c) The court in which the proceeding is or was pending upon application made by the corporation or the agent or the attorney or other person rendering services in connection with the defense, whether or not the application by the agent, attorney, or other person is opposed by the corporation.

**Section 6. Advance of Expenses.** Expenses incurred in defending any proceeding may be advanced by the corporation before the final disposition of the proceeding upon receipt of an undertaking by or on behalf of the agent to repay the amount advanced unless it shall be determined ultimately that the agent is entitled to be indemnified as authorized in this Article VI.

**Section 7. Other Indemnification.** No provision made by the corporation to indemnify its or its subsidiary's directors or officers for the defense of any proceeding, whether contained in the Articles, Bylaws, a resolution of members or directors, an agreement, or otherwise, shall be valid unless consistent with this Article VI. Nothing contained in this Article VI shall affect any right to indemnification to which persons other than those directors and officers may be entitled by contract or otherwise.

**Section 8. Forms of Indemnification Not Permitted.** No indemnification or advance shall be made under this Article VI, except as provided in Section 4 or 5(c), in any circumstances in which it appears:

- (a) That it would be inconsistent with a provision of the Articles, these Bylaws, a resolution of the members, or an agreement in effect at the time of the accrual of the alleged cause of action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or
- (b) That it would be inconsistent with any condition expressly imposed by a court in approving a settlement.

**Section 9. Insurance.** The corporation shall have power to purchase and maintain insurance on behalf of any agent of the corporation against any liability asserted against or incurred by the agent in that capacity or arising out of the agent's status as such whether or not the corporation would have the power to indemnify the agent against that liability under the provisions of this Article VI.

**Section 10. Nonapplicability to Fiduciaries of Employee Benefit Plans.** This Article VI does not apply to any proceeding against any trustee, investment manager, or other fiduciary of an employee benefit plan

in that person's capacity as such, even though that person may also be an agent of the corporation as defined in Section 1 of this Article VI. The corporation shall have power to indemnify that trustee, investment manager, or other fiduciary to the extent permitted by Section 7140(e) of the California Public Benefit Corporation Law.

**Section 11. Meetings of the Board.** On written request to the board by any agent of the corporation seeking indemnification under these bylaws or the California Nonprofit Mutual Benefit Corporation Law, the Board shall promptly convene a meeting and in good faith decide whether the applicable standard(s) have been met and, subject to any required findings and other constraints, if any, upon its power to provide such indemnification, if they have been met, shall promptly authorize such indemnification.

**Section 12. Federal and State Exculpatory Provisions.** Nothing in this Article VI shall limit or otherwise adversely affect the rights of qualifying agents of this corporation under the Federal Volunteer Protection Act of 1997, as amended, Section 5047.5 of the California Corporations Code or similar provisions of other laws or public policies limiting such liability, as now in effect or as any thereof may be amended.

**Section 13. Separability.** Each and every paragraph, sentence, term, and provision of this Article is separate and distinct so that if any paragraph, sentence, term, or provision shall be held to be invalid or unenforceable for any reason, its invalidity or unenforceability shall not affect the validity or enforceability of any other paragraph, sentence, term, or provision of this Article. To the extent required, any paragraph, sentence, term, or provision of this Article may be modified by a court of competent jurisdiction to preserve its validity and to provide the claimant with, subject to the limitations set forth in this Article and any agreement between the corporation and the claimant, the broadest possible indemnification permitted under applicable law.

## **ARTICLE VII EMERGENCY PROVISIONS**

During any emergency as defined in Corporations Code Section 7140, including a natural catastrophe, an attack on this state or nation, an act of terrorism or other manmade disaster, or a state of emergency proclaimed by the Governor or by the President, as a result of which a quorum of the Board or of the Executive Committee, if any, cannot readily be convened for action, a meeting of the Board or of that committee may be called by any officer or director. Notice of a meeting so called need be given only to such of the directors or members of the committee, as the case may be, as it may be feasible to reach at the time and by such means as may be feasible at the time including, without limitation, publication, or radio. The director or directors in attendance at the meeting of the Board so called, and the member or members of the Executive Committee, if any, in attendance at the meeting of the committee so called, shall constitute a quorum. If none is in attendance at the meeting, the officers or other persons designated on a list approved by the Board before the emergency, all in the order of priority and subject to conditions and for the period of time (not longer than reasonably necessary after the termination of the emergency) as provided in the resolution approving the list, shall, to the extent required to provide a quorum at any meeting of the Board or of the Executive Committee, be deemed directors or members of the committee, as the case may be, for that meeting.

The Board, either before or during any such emergency, may provide, and from time to time modify, lines of succession in the event that during the emergency any or all officers or agents of the corporation shall for any reason be rendered incapable of discharging their duties. The Board, either before or during any

emergency, may, effective in the emergency, change the principal office or designate several alternative offices or authorize the officers so to do.

**CERTIFICATE OF SECRETARY**

I, the undersigned, do hereby certify that:

1. I am the duly elected and acting secretary of SALINAS RIVER CHANNEL STREAM MAINTENANCE PROGRAM'S RIVER MANAGEMENT UNIT ASSOCIATION, INC., a California nonprofit mutual benefit corporation;

2. The foregoing Bylaws comprised of 22 pages, including this page, constitute the Bylaws of the corporation duly adopted by the Board of Directors thereof on June 26, 2017.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the seal of the corporation this 26th day of June, 2017.

\_\_\_\_\_  
\_\_\_\_\_, Secretary

Salinas River Stream Maint. Program's River Mgt.  
 1140 Abbott St., Ste. C  
 CA 93901

# Invoice

Date	Invoice #
8/31/2017	20

Bill To
City of King Octavio Hurtado 212 S. Vanderhurst Ave. King City, CA 93930

P.O. No.	Terms	Project
	Due on receipt	

Quantity	Description	Rate	Amount
1	Maintenance Area Fee	2,000.00	2,000.00
1	Maintenance-Sediment Removal	1,000.00	1,000.00
1	Landowner Fee	1,050.00	1,050.00
		<b>Total</b>	<b>\$4,050.00</b>