California Regional Water Quality Control Board
San Diego Region

Over 50 Years Serving San Diego, Orange, and Riverside Counties
Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

9174 Sky Park Court, Suite 100, San Diego, California 92123-4353
(858) 467-2952 • Fax (858) 571-6972
http:// www.waterboards.ca.gov/sandiego

July 26, 2010

Certified Mail – Return Receipt Requested
Article Number: 7009-1410-0002-2347-4848

In reply refer to:
749089: amonji

Hasan Daabas
Caltrans, District 11
4050 Taylor Street
San Diego, CA 92110

Dear Mr. Daabas:

Subject: Action on Request for Clean Water Act Section 401 Water Quality Certification for the **San Onofre Culvert/Slope Repair Project** Water Quality Certification No. **10C-010**

Enclosed find Clean Water Act Section 401 Water Quality Certification for discharge to Waters of the U.S. and acknowledgment of enrollment under State Water Resources Control Board Order No. 2003-017 DWQ for the **San Onofre Culvert/Slope Repair Project** (project). A description of the project and project location can be found in the project information sheet, location map, and site maps, which are included as Attachments 1 through 4.

Any petition for reconsideration of this Certification must be filed with the State Water Resources Control Board within 30 days of certification action (23 CCR § 3867). If no petition is received, it will be assumed that you have accepted and will comply with all the conditions of this Certification.

Failure to comply with all conditions of this Certification may subject you to enforcement actions by the California Regional Water Quality Control Board, San Diego Region, including administrative enforcement orders requiring you to cease and desist from violations, or to clean up waste and abate existing or threatened conditions of pollution or nuisance; administrative civil liability in amounts of up to $10,000 per day per violation; referral to the State Attorney General for injunctive relief; and, referral to the District Attorney for criminal prosecution.

In the subject line of any response, please include the requested "**In reply refer to:**" information located in the heading of this letter. For questions pertaining to the subject matter, please contact Alan Monji at (858) 637-7140 or amonji@waterboards.ca.gov.

Respectfully,

DAVID W. GIBSON
Executive Officer

Enclosures:

Clean Water Act Section 401 Water Quality Certification No. 10C-010 for the San Onofre Creek Culvert/Slope Repair Project, with 5 attachments

cc: Refer to Attachment 2 of Certification 10C-010 for Distribution List.

Tech Staff Info & Use	
File No.	10C-010
WDID	9000002028
Reg. Measure ID	372934
Place ID	749089
Party ID	7222
Person ID	56591

Linda S. Adams
Secretary for
Environmental Protection

California Regional Water Quality Control Board

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Arnold Schwarzenegger
Governor

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

PROJECT: **San Onofre Culvert/Slope Repair Project**
Certification Number (10C-010),
WDID: 9 000002028

APPLICANT: **Hasan Daabas**
Caltrans, District 11
4050 Taylor Street
San Diego, CA 92110

CIWQS
Reg. Meas. ID: 372934
Place ID: 749089
Party ID: 7222

ACTION:

☐ Order for Low Impact Certification	☐ Order for Denial of Certification
☑ Order for Technically-conditioned Certification	☐ Waiver of Waste Discharge Requirements
☑ Enrollment in SWRCB GWDR Order No. 2003-017 DWQ	☐ Enrollment in Isolated Waters Order No. 2004-004 DWQ

PROJECT DESCRIPTION:

The project site is located between Interstate 5 (I-5) and old Highway 101 (Hwy 101), south of Basilone Road, in northern coastal San Diego County. The project includes the replacement of a damaged culvert with a concrete drain and the addition of a riprap pad at the drain outlet to slow the water velocity before entering San Onofre Creek. The slope would be reconstructed and a detention basin placed at the top of the slope to allow sediment to settle out before entering the drain. The project will temporarily impact 0.014 acres (83 linear feet) and permanently impact 0.001 acres (30 linear feet) of San Onofre Creek.

STANDARD CONDITIONS:

The following three standard conditions apply to all Certification actions, except as noted under Condition 3 for denials (Action 3).

1. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to

section 13330 of the California Water Code and section 3867 of Title 23 of the California Code of Regulations (23 CCR).

2. This Certification action is not intended and must not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. The validity of any non-denial Certification action (Actions 1 and 2) must be conditioned upon total payment of the full fee required under 23 CCR section 3833, unless otherwise stated in writing by the certifying agency.

ADDITIONAL CONDITIONS:

In addition to the three standard conditions, Caltrans, District 11 must satisfy the following:

A. GENERAL CONDITIONS:

1. Caltrans, District 11 must, at all times, fully comply with the engineering plans, specifications and technical reports submitted to the California San Diego Regional Water Quality Control Board, San Diego Region (San Diego Water Board), to support this 401 Water Quality Certification (Certification) and all subsequent submittals required as part of this Certification and as described in Attachments 1 and 4. The conditions within this Certification must supersede conflicting provisions within such plans submitted prior to the Certification action. Any modifications thereto, would require notification to the San Diego Water Board and reevaluation for individual Waste Discharge Requirements and/or Certification amendment.

2. During construction, Caltrans, District 11 must maintain a copy of this Certification at the project site so as to be available at all times to site personnel and agencies.

3. Caltrans, District 11 must permit the San Diego Water Board or its authorized representative at all times, upon presentation of credentials:

    a. Entry onto project premises, including all areas on which wetland fill or wetland mitigation is located or in which records are kept.
    b. Access to copy any records required to be kept under the terms and conditions of this Certification.
    c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Certification.

d. Sampling of any discharge or surface water covered by this Order.

4. Caltrans, District 11 must notify the San Diego Water Board within **24 hours** of any unauthorized discharge, including hazardous or toxic materials, 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 best management practice (BMPs) or other measures that will be implemented to prevent future discharges.

5. Caltrans, District 11 must, at all times, maintain appropriate types and sufficient quantities of materials onsite to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the U.S. and/or State.

6. This Certification is not transferable in its entirety or in part to any person except after notice to the Executive Officer of the San Diego Water Board in accordance with the following terms.

   a. Transfer of Property Ownership: Caltrans, District 11 must notify the San Diego Water Board of any change in ownership of the project area Notification of change in ownership must include, but not be limited to, a statement that Caltrans, District 11 has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the Executive officer of the San Diego Water Board within **10 days** of the transfer of ownership.

   b. Transfer of Mitigation Responsibility: Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in Section D shall include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board within **10 days** of the transfer date.

7. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation must 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.

8. In response to a suspected violation of any condition of this Certification, the San Diego 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 San Diego Water Board deems appropriate, provided that the burden, including costs, of the reports must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

9. In response to any violation of the conditions of this Certification, the San Diego Water Board may add to or modify the conditions of this Certification as appropriate to ensure compliance.

10. Caltrans, District 11 and successor owners must submit annual progress reports to the San Diego Water Board prior to **August 1** of each year following the issuance of this Certification until the project has reached completion.

B. PROJECT CONDITIONS:

1. Prior to the start of the project, and annually thereafter, Caltrans, District 11 must educate all personnel on the requirements in this Certification, pollution prevention measures, spill response, and BMP implementation and maintenance.

2. Caltrans, District 11 must comply with the requirements of State Water Resources Control Board Water Quality Order No. 2003-0017-DWQ, Statewide General Waste Discharge Requirements for discharges of dredged or fill material that have received State Water Quality Certification. These General Waste Discharge Requirement are accessible at: http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf.

3. Caltrans, District 11 must comply with the requirements of State Water Resources Control Board Water Quality Order No. 99-06-DWQ, NPDES No. CAS000003, the NPDES Permit for Statewide Storm Water Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans), July 1999.

4. Caltrans, District 11 must notify the San Diego Water Board in writing at least **5 days** prior to the actual commencement of dredge, fill, and discharge

activities.

5. The treatment, storage, and disposal of wastewater during the life of the project must be done in accordance with waste discharge requirements established by the San Diego Water Board pursuant to CWC § 13260.

6. Discharges of concentrated flow during construction or after completion must not cause downstream erosion or damage to properties or stream habitat.

7. Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the United States and/or the State or placed in locations that may be subjected to storm flows. Pollutants discharged to areas within a stream diversion area must be removed at the end of each work day or sooner if rain is predicted.

8. All surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.

9. Substances hazardous to aquatic life including, but not limited to, petroleum products, raw cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the United States and/or State. BMPs must be implemented to prevent such discharges during each project activity involving hazardous materials.

10. All construction activity within waters of the U.S. and/or State must occur during the dry season (May 1 - September 30).

11. Removal of vegetation must occur by hand, mechanically, or using EPA approved herbicides deployed using applicable BMPs to prevent impacts to Beneficial Uses of waters of the State. Removal of vegetation must occur outside of the avian nesting season (March 15- August 31).

C. Compensatory Mitigation For Loss of Waters of the U.S./State

1. Mitigation for permanent discharges to 0.001 acres and temporary discharges to 0.014 acres of waters of the United States associated with culvert replacement must be achieved by through the deduction of 0.022 acres of restoration credits from the Marron Mitigation Site. Mitigation map and ledger included in Attachment 3.

2. Caltrans, District 11 must restore all areas of temporary impacts and all other areas of temporary disturbance which could result in a discharge or a threatened discharge to waters of the United States/State. Restoration must include grading of disturbed areas to pre-project contours and revegetation with native species. Caltrans, District 11 must implement all necessary BMPs to control erosion and runoff from areas associated with this project.

3. Throughout the mitigation monitoring program mitigation areas must be maintained free of perennial exotic plant species including, but not limited to, pampas grass, giant reed, tamarisk, sweet fennel, tree tobacco, castor bean, and pepper tree. Annual exotic plant species must not occupy more than 10 percent of the onsite or offsite mitigation areas.

4. San Diego Water Board acceptance of the final mitigation plan applies only to the site and plan that mitigates for the San Onofre Culvert/Slope Repair Project and must not be construed as approval of the mitigation site or plan for use by other current or future projects that are planning to use the Project site for mitigation.

5. For the purpose of determining mitigation credit for the removal of exotic/invasive plant species, only the actual area occupied by exotic/invasive plant species must be quantified to comply with mitigation requirements.

6. For purposes of this Certification, establishment is defined as the creation of vegetated or unvegetated waters of the U.S./State where the resource has never previously existed (e.g. conversion of nonnative grassland to a freshwater marsh). Restoration is divided into two activities, re-establishment and rehabilitation. Re-establishment is defined as the return of natural/historic functions to a site where vegetated or unvegetated waters of the U.S./State previously existed (e.g., removal of fill material to restore a drainage). Rehabilitation is defined as the improvement of the general suite of functions of degraded vegetated or unvegetated waters of the U.S./State (e.g., removal of a heavy infestation or monoculture of exotic plant species from jurisdictional areas and replacing with native species). Enhancement is defined as the improvement to one or two functions of existing vegetated or unvegetated waters of the U.S./State (e.g., removal of small patches of exotic plant species from an area containing predominantly natural plant species). Preservation is defined as the acquisition and legal protection from future impacts in perpetuity of existing vegetated or unvegetated waters of the U.S./State (e.g., conservation easement).

D. Stream Photo Documentation Procedure

1. Caltrans, District 11, and its successors, must conduct photo documentation of the project site, including all areas of permanent and temporary impact,

prior to and after project construction. Photo documentation must be conducted in accordance with the State Water Resources Control Board Standard Operating Procedure 4.2.1.4: Stream Photo Documentation Procedure, included as Attachment Number (5). In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced. Caltrans, District 11 must submit this information in a photo documentation report to the San Diego Water Board with the **Project Annual Reports**. The report must include a compact disc that contains digital files of all the photos (jpeg file type or similar).

E. REPORTING:

1. All information requested in this Certification is pursuant to California Water Code (CWC) section 13267. Civil liability may be administratively imposed by the San Diego Water Board for failure to furnish requested information pursuant to CWC section 13268.

2. All reports and information submitted to the San Diego Water Board must be submitted in both hardcopy and electronic format. The preferred electronic format for each report submission is one file in PDF format that is also Optical Character Recognition (OCR) capable.

3. Caltrans, District 11 must submit a report to the San Diego Water Board with the **Final Project Annual Report**. The report should include as-built drawings no bigger than 11" x 17" and photos of the completed project.

4. All applications, reports, or information submitted to the San Diego Water Board must be signed and certified as follows:

    a. For a corporation, by a responsible corporate officer of at least the level of vice president.
    b. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
    c. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.

5. A duly authorized representative of a person designated in Items 4.a. through 4.c. above may sign documents if:

    a. The authorization is made in writing by a person described in Items 4.a. through 4.c. above.
    b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
    c. The written authorization is submitted to the San Diego Water Board Executive Officer.

6. All applications, reports, or information submitted to the San Diego Water Board must be signed and certified as follows:

   "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

7. Caltrans, District 11 must submit reports required under this Certification, or other information required by the San Diego Water Board, to:

   Executive Officer
   California Regional Water Quality Control Board
   San Diego Region
   Attn: 401 Certification; Project No. 09C-034
   9174 Sky Park Court, Suite 100
   San Diego, California 92123

8. Required Reports: The following list summarizes the reports required per the conditions of this Certification to be submitted to the San Diego Water Board.

Report Topic	Certification Condition	Due Date(s)
Project Annual Reports	A.10	August 01, Annually
Notification of dredge/fill	B.3	5 days prior
Photo Documentation	D.1	With Annual Reports
As-Built Drawings	E.3	Final Annual Report

CEQA FINDINGS:

1. Caltrans District 11 is the lead agency under the California Environmental Quality Act (Public Resources Code section 21000, et seq., (CEQA)), and filed a Notice of Exemption on December 28, 2009. Caltrans District 11 determined the project is exempt per Categorical Exemption Class I.

PUBLIC NOTIFICATION OF PROJECT APPLICATION:

On February 3, 2010 receipt of the project application was posted on the San Diego Water Board web site to serve as appropriate notification to the public. No comments were received for this project.

REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON:

Alan Monji
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123
858-467-2727
amonji@waterboards.ca.gov

WATER QUALITY CERTIFICATION:

I hereby certify that the proposed discharge from San Onofre Culvert/Slope Repair Project (Project No. 10C-010) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)," which requires compliance with all conditions of this Water Quality Certification. Please note that enrollment under Order No. 2003-017 DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue waste discharge requirements at that time.

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 applicants' project description and/or on the attached Project Information Sheet, and (b) on compliance with all applicable requirements of the San Diego Water Board's Water Quality Control Plan (Basin Plan).

David W. R

DAVID W. GIBSON
Executive Officer
Regional Water Quality Control Board

7-21-10
Date

Attachments:
1. Project Information
2. Distribution List
3. Project and Site Maps
4. Photodocumentation Procedure

ATTACHMENT 1
PROJECT INFORMATION

Applicant:	Caltrans, District 11 Attention: Hasan Daabas 4050 Taylor Street, San Diego, CA 92110 Telephone: (619) 688-3367 Facsimile: (619) 688-6998 Email: Hasan_Daabas@dot.ca.gov
Project Name:	San Onofre Culvert/Slope Repair Project
Project Location:	San Diego County, CA Latitude: 33°22'59.229"N, Longitude: 117°34'40.177"W
Type of Project:	Replacement of a damaged culvert.
Need for Project:	To replacement of a damaged culvert and reconstruct damaged slope caused by storm water run-off from Interstate 5.
Project Description:	The project site is located between Interstate 5 (I-5) and old Highway 101 (Hwy 101), south of Basilone Road, in northern coastal San Diego County. The project includes the replacement of a damaged culvert with a concrete drain and the addition of a riprap pad at the drain outlet to slow the water velocity before entering San Onofre Creek. The slope would be reconstructed and a detention basin placed at the top of the slope to allow sediment to settle out before entering the drain. The project will temporarily impact 0.014 acres (83 linear feet) and permanently impact 0.001 acres (30 linear feet) of San Onofre Creek.
Federal Agency/Permit:	U.S. Army Corps of Engineers §404, Stephanie Hall U.S. Fish and Wildlife Service Section 7, Janet Stuckrath
Other Required Regulatory Approvals:	California Department of Fish and Game Streambed Alteration Agreement, Darren Bradford
California Environmental Quality Act (CEQA) Compliance:	Categorical Exemption/Categorical Exclusion, Section 15301, Class 1, (c).

Receiving Water:	San Onofre Creek, San Juan Hydrologic Unit
Affected Waters of the United States:	Temporary: Streambed: 0.014 Permanent: Streambed: 0.001
Related Projects Implemented/to be Implemented by the Applicant(s):	None
Compensatory Mitigation:	Marron Mitigation Site credits, 0.022 acres.
Mitigation Location:	Marron Mitigation Site, San Luis Rey River. Bonsall, CA.
Best Management Practices (BMPs):	Construction: In accordance with State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, and any subsequent re-issuance as applicable.
Public Notice:	On February 3, 2010 receipt of the project application was posted on the San Diego Water Board web site to serve as appropriate notification to the public. No comments were received for this project.
Fees:	Total Due: $1,360.20 Total Paid: $1,360.20 (Check No. 351658 and 379199)
CIWQS:	Regulatory Measure ID: 372934 Place ID: 748089 Party ID: 7222

ATTACHMENT 2
E-MAIL DISTRIBUTION LIST

Hasan Daabas, California Department of Transportation
Hasan_Daabas @dot.ca.gov

Bruce April, California Department of Transportation
Bruce_April@dot.ca.gov

Stephanie Hall, US Army Corps of Engineers
stephanie.j.hall@usace.army.mil

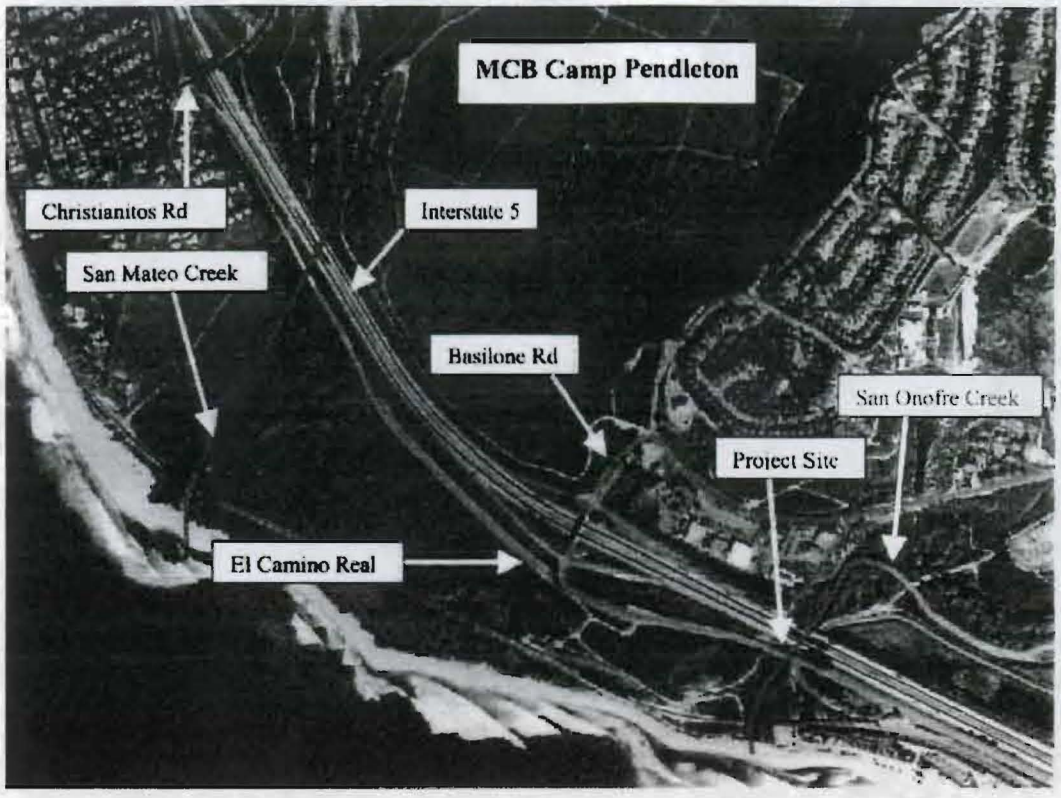
Darren Bradford, California Department of Fish and Game
dbradford@dfg.ca.gov

State Water Resources Control Board, Division of Water Quality
401 Water Quality Certification and Wetlands Unit
Stateboard401@waterboards.ca.gov

U.S. Department of the Interior
Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92011

U.S. EPA, OWOW, Region 9
75 Hawthorne St.,
San Francisco, CA 94105
R9-WTR8-Mailbox@epa.gov

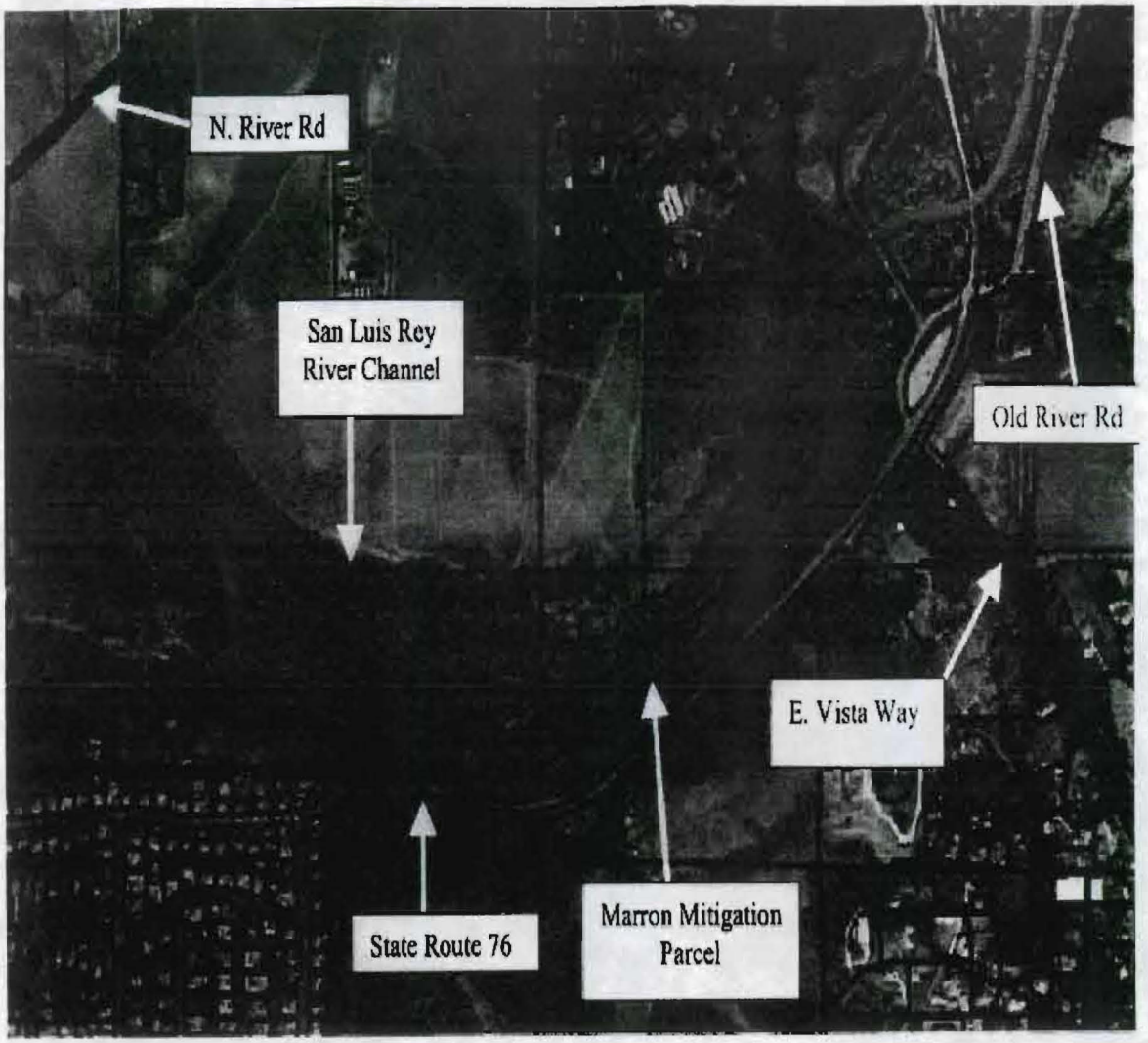
ATTACHMENT 3
PROJECT and SITE MAPS



California Department of Transportation

San Onofre Culvert/Slope Repair Project
EA 354501, 11-SD-5, Post Mile 71.0
Lat 33°22'59.229"/Long 117°34'40.177"

PROJECT LOCATION MAP



California Department of Transportation
Marron Mitigation Site
01/13/2010

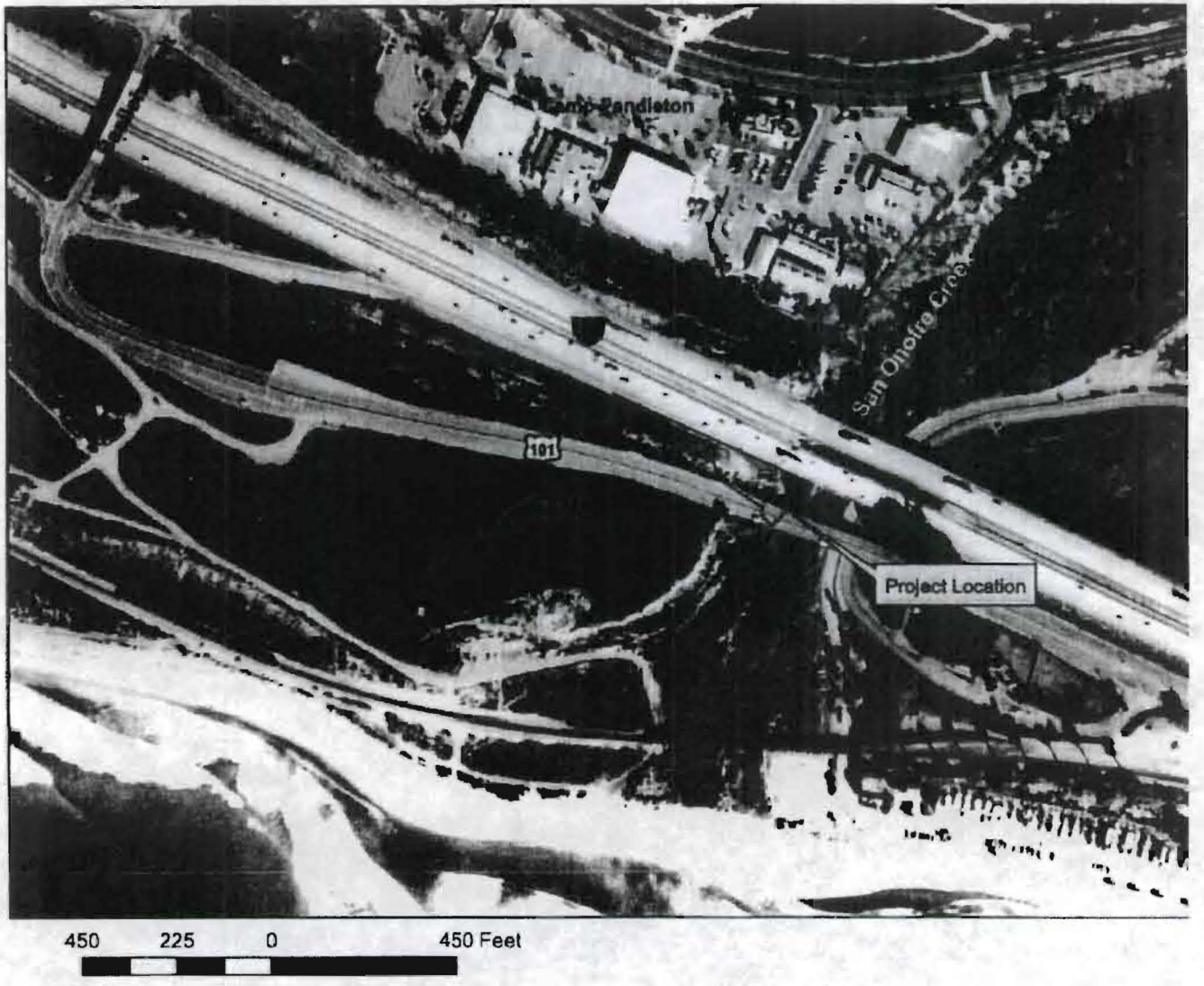
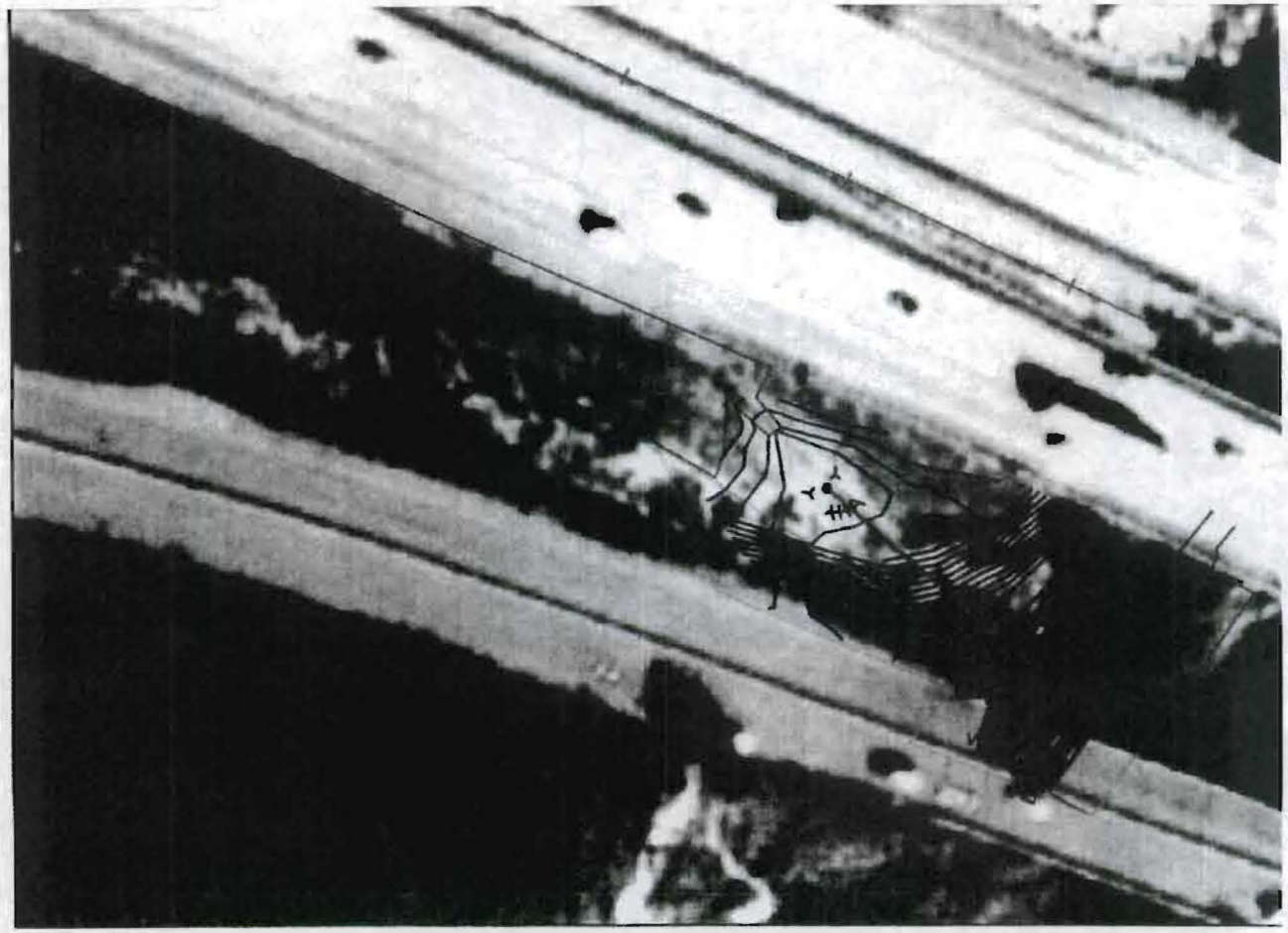


Figure 2. Project Location

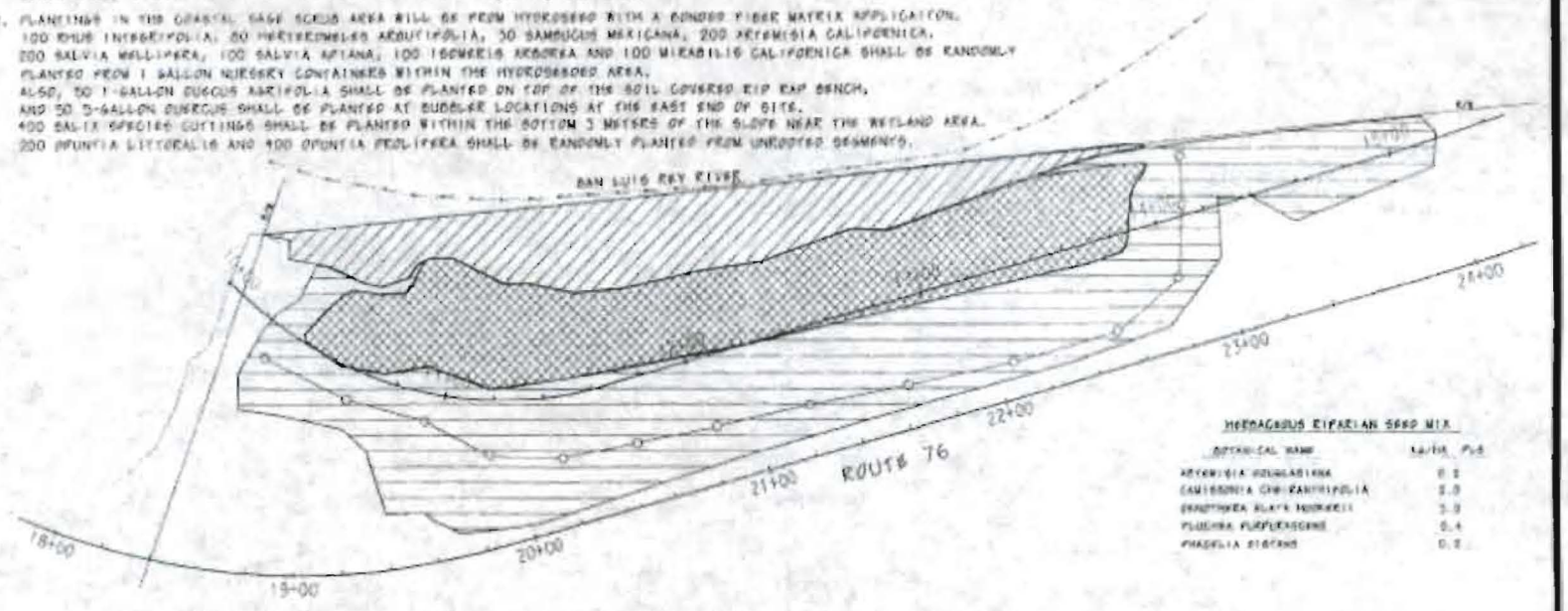


Slope Grading
New Culvert
Temporary Staging and Access
Riprap

Figure 3. Slope Grading and Culvert Repair

NOTES:

1. PLANTINGS IN THE SOUTHERN WILLOW SCRUB AREA WILL BE FROM 1 AND 5 GALLON NURSERY CONTAINERS, RANDOMLY MIXED AND PLANTED AT 1.8 METRE (6 FT) O.C. SPACING.
2. PLANTINGS IN THE COASTAL SAGE SCRUB AREA WILL BE FROM HYDROSEED WITH A BONDED FIBER MATRIX APPLICATION. 100 RHUS INTEGRIFOLIA, 50 HETEROMELES ARBUTIFOLIA, 50 SAMBUCUS MEXICANA, 200 ARTEMISIA CALIFORNICA, 200 SALVIA MELLIFERA, 100 SALVIA APIANA, 100 ISOMERIS ARBOREA AND 100 MIRABILIS CALIFORNICA SHALL BE RANDOMLY PLANTED FROM 1 GALLON NURSERY CONTAINERS WITHIN THE HYDROSEEDED AREA. ALSO, 50 1-GALLON QUERCUS AGRIFOLIA SHALL BE PLANTED ON TOP OF THE SOIL COVERED RIP RAP BENCH, AND 50 5-GALLON QUERCUS SHALL BE PLANTED AT BUBBLER LOCATIONS AT THE EAST END OF SITE. 400 SALIX SPECIES CUTTINGS SHALL BE PLANTED WITHIN THE BOTTOM 3 METERS OF THE SLOPE NEAR THE WETLAND AREA. 200 OPUNTIA LITTORALIS AND 400 OPUNTIA PROLIFERA SHALL BE RANDOMLY PLANTED FROM UNROOTED SEGMENTS.



HYDROSEED RIPARIAN SEED MIX

BOTANICAL NAME	LB/AC PLS
ARTEMISIA DOUGLASIANA	0.5
CAMISSONIA CHEIRANTHIFOLIA	3.0
ERIOPHYLLUM CONFERTIFLORUM	3.0
PLUCHEA PURPURASCENS	0.4
PHACELIA DISTANS	0.5

LEGEND

SOUTHERN WILLOW SCRUB - 1.13 HECTARES (2.8 ACRES)
1170 SALIX LASIOLEPIS, 585 SALIX EXIGUA, 585 SALIX GOODDINGII, 585 SALIX LAEVIGATA, 195 POPULUS FREMONTII 195 PLATANUS RACEMOSA, 585 BACCHARIS SALICIFOLIA, 200 ARTEMISIA PALMERI, 200 ANEMOPSIS CALIFORNICA, 200 IVA HAYESIANA, 100 RUBUS URSINUS, 100 VITIS GIRDIANA AND NATIVE HYDROSEED RIPARIAN SEEDING.

DIEGAN COASTAL SAGE SCRUB - 2.30 HECTARES (5.7 ACRES)
ARTEMISIA CALIFORNICA, ERIOGONUM FASCICULATUM, LOTUS SCOPARIUS, BACCHARIS PILULARIS, SALVIA MELLIFERA, SALVIA APIANA, NASSELLA PULCHRA AND ENCELIA CALIFORNICA FROM SEED. ALSO, SAMBUCUS MEXICANA, RHUS INTEGRIFOLIA, HETEROMELES ARBUTIFOLIA, SALVIA MELLIFERA, ARTEMISIA CALIFORNICA, SALVIA APIANA, ISOMERIS ARBOREA, MIRABILIS CALIFORNICA AND QUERCUS AGRIFOLIA FROM CONTAINERS. OPUNTIA LITTORALIS AND OPUNTIA PROLIFERA FROM UNROOTED SEGMENTS.

MITIGATION ENHANCEMENT - 0.73 HECTARES (1.8 ACRES)
EXOTIC PLANT REMOVAL AND REPLANT VOIDS WITH 400 WILLOW CUTTINGS IN THE APPROPRIATE SEASON.

SOLID BARRIER FENCING - 550 METERS (1800 LINEAL FEET)

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

MARRON MITIGATION SITE

PLANTING PLAN
FIGURE 5

MARRON MITIGATION SITE

Bank Location, Type of Resources, & Any Restrictions	Credits Debited (date)	Project (Purchaser)	Credits Available
			2.8 acres
Southern Willow Scrub/Freshwater Marsh (CREATION)	1.910 (8/2/04)	San Mateo	0.89
	0.05 ac (2/2/09)	Monserate (EA 27220	0.84
	0.08 ac (2/2/09)	Flowerwood (272301)	0.76
	0.044 ac (6/09)	Via Monserate (30420	0.716
	0.29(7/09)	Pala (273401)	0.425
	0.022 ac (1/27/10)	San Onofre Culvert/sk	0.404

Bank Location, Type of Resources, & Any Restrictions	Credits Debited (date)	Project (Purchaser)	Credits Available
			1.8 acres
Southern Willow Scrub/Freshwater Marsh (ENHANCEMENT)	0.034 @ 2:1 ratio (8/2/04)	SR-76/Olive Hill	1.766
	0.10 (7/16/08)	Culverts (EA 270800)	1.666
	0.68(7/09)	Pala (273401)	0.986

Bank Location, Type of Resources, & Any Restrictions	Credits Debited (date)	Project (Purchaser)	Credits Available
			5.7 acres
Coastal Sage Scrub	0.040 (8/2/04)	San Mateo	5.66
	1.380 (8/2/04)	SR-76/Olive Hill	4.28
	0.06	I-5 Drainage (EA2791(	4.22
	0.08 (7/16/08)	Culverts (EA 270800)	4.14

1/27/2010

ATTACHMENT 4
STREAM PHOTO DOCUMENTATION PROCEDURES

Standard Operating Procedure (SOP)

Stream Photo Documentation Procedure
(CARCD 2001, Written by TAC Visual Assessments work group)

Introduction:

Photographs provide a qualitative, and potentially semi-quantitative, record of conditions in a watershed or on a water body. Photographs can be used to document general conditions on a reach of a stream during a stream walk, pollution events or other impacts, assess resource conditions over time, or can be used to document temporal progress for restoration efforts or other projects designed to benefit water quality. Photographic technology is available to anyone and it does not require a large degree of training or expensive equipment. Photos can be used in reports, presentations, or uploaded onto a computer website or GIS program. This approach is useful in providing a visual portrait of water resources to those who may never have the opportunity to actually visit a monitoring site.

Equipment:

Use the same camera to the extent possible for each photo throughout the duration of the project. Either 35 mm color or digital color cameras are recommended, accompanied by a telephoto lens. If you must change cameras during the program, replace the original camera with a similar one comparable in terms of media (digital vs. 35 mm) and other characteristics. A complete equipment list is suggested as follows:

Required:

- Camera and backup camera
- Folder with copies of previous photos (do not carry original photos in the field)
- Topographic and/or road map
- Aerial photos if available
- Compass
- Timepiece
- Extra film or digital disk capacity (whichever is applicable)
- Extra batteries for camera (if applicable)
- Photo-log data sheets or, alternatively, a bound notebook dedicated to the project
- Yellow photo sign form and black marker, or, alternatively, a small black board and chalk

Optional:

- GPS unit
- Stadia rod (for scale on landscape shots)
- Ruler (for scale on close up views of streams and vegetation)
- Steel fence posts for dedicating fixed photo points in the absence of available fixed landmarks

How to Access Aerial Photographs:

Aerial Photos can be obtained from the following federal agencies:

USGS Earth Science Information Center
507 National Center
12201 Sunrise Valley Drive
Reston, VA 22092
800-USA-MAPS

USDA Consolidated Farm Service Agencies
Aerial Photography Field Office
222 West 2300 South
P.O. Box 30010
Salt Lake City, UT 84103-0010
801-524-5856

Cartographic and Architectural Branch
National Archives and Records Administration
8601 Adelphi Road
College park, MD 20740-6001
301-713-7040

Roles and Duties of Team:

The team should be comprised of a minimum of two people, and preferably three people for restoration or other water quality improvement projects, as follows:

1. Primary Photographer
2. Subject, target for centering the photo and providing scale
3. Person responsible for determining geographic position and holding the photo sign forms or blackboard.

One of these people is also responsible for taking field notes to describe and record photos and photo points.

Safety Concerns:

Persons involved in photo monitoring should **ALWAYS** put safety first. For safety reasons, always have at least two 2 volunteers for the survey. Make sure that the

area(s) you are surveying either are accessible to the public or that you have obtained permission from the landowner prior to the survey.

Some safety concerns that may be encountered during the survey include, but are not limited to:

- Inclement weather
- Flood conditions, fast flowing water, or very cold water
- Poisonous plants (e.g.: poison oak)
- Dangerous insects and animals (e.g.: bees, rattlesnakes, range animals such as cattle, etc.)
- Harmful or hazardous trash (e.g.: broken glass, hypodermic needles, human feces)

We recommend that the volunteer coordinator or leader discuss the potential hazards with all volunteers prior to any fieldwork.

General Instructions:

From the inception of any photo documentation project until it is completed, always take each photo from the same position (photo point), and at the same bearing and vertical angle at that photo point. Photo point positions should be thoroughly documented, including photographs taken of the photo point. Refer to copies of previous photos when arriving at the photo point. Try to maintain a level (horizontal) camera view unless the terrain is sloped. (If the photo can not be horizontal due to the slope, then record the angle for that photo.) When photo points are first being selected, consider the type of project (meadow or stream restoration, vegetation management for fire control, ambient or event monitoring as part of a stream walk, etc.) and refer to the guidance listed on *Suggestions for Photo Points by Type of Project*.

When taking photographs, try to include landscape features that are unlikely to change over several years (buildings, other structures, and landscape features such as peaks, rock outcrops, large trees, etc.) so that repeat photos will be easy to position. Lighting is, of course, a key ingredient so give consideration to the angle of light, cloud cover, background, shadows, and contrasts. Close view photographs taken from the north (i.e., facing south) will minimize shadows. Medium and long view photos are best shot with the sun at the photographer's back. Some artistic expression is encouraged as some photos may be used on websites and in slide shows (early morning and late evening shots may be useful for this purpose). Seasonal changes can be used to advantage as foliage, stream flow, cloud cover, and site access fluctuate. It is often important to include a ruler, stadia rod, person, farm animal, or automobile in photos to convey the scale of the image. Of particular concern is the angle from which the photo is taken. Oftentimes an overhead or elevated shot from a bridge, cliff, peak, tree, etc. will be instrumental in conveying the full dimensions of the

project. Of most importance overall, however, is being aware of the goal(s) of the project and capturing images that clearly demonstrate progress towards achieving those goal(s). Again, reference to *Suggestions for Photo Points by Type of Project* may be helpful.

If possible, try to include a black board or yellow photo sign in the view, marked at a minimum with the location, subject, time and date of the photograph. A blank photo sign form is included in this document.

Recording Information:

Use a systematic method of recording information about each project, photo point, and photo. The following information should be entered on the photo-log forms (blank form included in this document) or in a dedicated notebook:

- Project or group name, and contract number (if applicable, e.g., for funded restoration projects)
- General location (stream, beach, city, etc.), and short narrative description of project's habitat type, goals, etc.
- Photographer and other team members
- Photo number
- Date
- Time (for each photograph)
- Photo point information, including:
    - Name or other unique identifier (abbreviated name and/or ID number)
    - Narrative description of location including proximity to and direction from notable landscape features like roads, fence lines, creeks, rock outcrops, large trees, buildings, previous photo points, etc. – sufficient for future photographers who have never visited the project to locate the photo point
    - Latitude, longitude, and altitude from map or GPS unit
- Magnetic compass bearing from the photo point to the subject
- Specific information about the subject of the photo
- Optional additional information: a true compass bearing (corrected for declination) from photo point to subject, time of sunrise and sunset (check newspaper or almanac), and cloud cover.

For ambient monitoring, the stream and shore walk form should be attached or referenced in the photo-log.

When monitoring the implementation of restoration, fuel reduction, or Best Management Practices (BMP) projects, include or attach to the photo-log a narrative description of observable progress in achieving the goals of the project. Provide supplementary information along with the photo, such as noticeable changes in habitat, wildlife, and water quality and quantity.

Archive all photos, along with the associated photo-log information, in a protected environment.

The Photo Point: Establishing Position of Photographer:

1. Have available a variety of methods for establishing position: maps, aerial photos, GPS, permanent markers and landmarks, etc. If the primary method fails (e.g., a GPS or lost marker post) then have an alternate method (map, aerial photo, copy of an original photograph of the photo-point, etc).

2. Select an existing structure or landmark (mailbox, telephone pole, benchmark, large rock, etc.), identify its latitude and longitude, and choose (and record for future use) the permanent position of the photographer relative to that landmark. Alternatively, choose the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the photographer.

3. For restoration, fuel reduction, and BMP projects, photograph the photo-points and carry copies of those photographs on subsequent field visits.

Determining the Compass Bearing:

1. Select and record the permanent magnetic bearing of the photo center view. You can also record the true compass bearing (corrected for declination) but do not substitute this for the magnetic bearing. Include a prominent landmark in a set position within the view. If possible, have an assistant stand at a fixed distance from both the photographer and the center of the view, holding a stadia rod if available, within the view of the camera; preferably position the stadia rod on one established, consistent side of the view for each photo (right or left side).
2. Alternatively, use the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the focal point (photo center).
3. When performing ambient or event photo monitoring, and when a compass is not available, then refer to a map and record the approximate bearing as north, south, east or west.

Suggestions for Photo Points by Type of Project:

Ambient or Event Monitoring, Including Photography Associated with Narrative Visual Assessments:

1. When first beginning an ambient monitoring program take representative long and/or medium view photos of stream reaches and segments of shoreline being monitored. Show the positions of these photos on a map, preferably on the stream/shore walk form. Subjects to be photographed include a representative view of the stream or shore condition at the beginning and ending positions of the segment being monitored, storm drain outfalls, confluence of tributaries, structures (e.g., bridges, dams, pipelines, etc.).

2. If possible, take a close view photograph of the substrate (streambed), algae, or submerged aquatic vegetation.

3. Time series: Photographs of these subjects at the same photo points should be repeated annually during the same season or month if possible.

4. Event monitoring refers to any unusual or sporadic conditions encountered during a stream or shore walk, such as trash dumps, turbidity events, oil spills, etc. Photograph and record information on your photo-log and on your Stream and Shore Walk Visual Assessment form. Report pollution events to the Regional Board. Report trash dumps to local authorities.

All Restoration and Fuel Reduction Projects – Time Series:

Take photos immediately before and after construction, planting, or vegetation removal. Long term monitoring should allow for at least annual photography for a minimum of three years after the project, and thereafter at 5 years and ten years.

Meadow Restoration:

1. Aerial view (satellite or airplane photography) if available.

2. In the absence of an aerial view, a landscape, long view showing an overlapping sequence of photos illustrating a long reach of stream and meadow (satellite photos, or hill close by, fly-over, etc.)

3. Long view up or down the longitudinal dimension of the creek showing riparian vegetation growth bounded on each side by grasses, sedges, or whatever that is lower in height

4. Long view of conversion of sage and other upland species back to meadow vegetation

5. Long view and medium view of streambed changes (straightened back to meandering, sediment back to gravel, etc.)

6. Medium and close views of structures, plantings, etc. intended to induce these changes

Stream Restoration/stabilization:

1. Aerial view (satellite or airplane photography) if available.

2. In the absence of an aerial view, a landscape, long-view showing all or representative sections of the project (bluff, bridge, etc.)

3. Long view up or down the stream (from stream level) showing changes in the stream bank, vegetation, etc.

4. Long view and medium view of streambed changes (thalweg, gravel, meanders, etc.)

5. Medium and close views of structures, plantings, etc. intended to induce these changes.

6. Optional: Use a tape set perpendicular across the stream channel at fixed points and include this tape in your photos described in 3 and 4 above. For specific procedures refer to Harrelson, Cheryl C., C.L. Rawlins, and John P. Potyondy, *Stream Channel Reference Sites: An Illustrated Guide to Field Techniques*, United States Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-245.

Vegetation Management for Fire Prevention ("fuel reduction"):

1. Aerial view (satellite or airplane photography) if available.

2. In the absence of an aerial view, a landscape, long view showing all or representative sections of the project (bluff, bridge, etc.)

3. Long view (wide angle if possible) showing the project area or areas. Preferably these long views should be from an elevated vantage point.

4. Medium view photos showing examples of vegetation changes, and plantings if included in the project. It is recommended that a person (preferably holding a stadia rod) be included in the view for scale

5. To the extent possible include medium and long view photos that include adjacent stream channels.

Stream Sediment Load or Erosion Monitoring:

1. Long views from bridge or other elevated position.

2. Medium views of bars and banks, with a person (preferably holding a stadia rod) in view for scale.

3. Close views of streambed with ruler or other common object in the view for scale.

4. Time series: Photograph during the dry season (low flow) once per year or after a significant flood event when streambed is visible. The flood events may be episodic in the south and seasonal in the north.

5. Optional: Use a tape set perpendicular across the stream channel at fixed points and include this tape in your photos described in 1 and 2 above. For specific procedures refer to Harrelson, Cheryl C., C.L. Rawlins, and John P. Potyondy, *Stream Channel Reference Sites: An Illustrated Guide to Field Techniques*, United States Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-245.

PHOTO- LOG FORM

Project:
Location:
Date:
Photographer:
Team members:

Photo #	Time	Photo Point ID	Photo Pt. Description & Location	Bearing to Subject	Subject Description

General Notes or Comments (weather, cloud cover, time of sunrise and sunset, other pertinent information):

PHOTO SIGN FORM: Print this form on yellow paper. Complete the following information for each photograph. Include in the photographic view so that it will be legible in the finished photo.

Location:

Subject Description:

Date:

Time:

NDER: *COMPLETE THIS SECTION*

Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
Print your name and address on the reverse so that we can return the card to you.
Attach this card to the back of the mailpiece, or on the front if space permits.

Article Addressed to:

Caltrans District 11
4050 Taylor St
San Diego, CA 92110
Attn: Hasan Daabas

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Signature
X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

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Form 3811, February 2004 9-24 Domestic Return Receipt A. Monsi 102595-02-M-1540

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