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

9174 Sky Park Court, Suite 100, San Diego, California 92123-4340
(858) 467-2952 • Fax (858) 571-6972
http:// www.waterboards.ca.gov/sandiego

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

August 6, 2009

Certified Mail No. 7009 0080 0000 7308 0585

In reply, please refer to:

Certification	08C-078
WDID	9 000001851
Reg. Measure	354035
Place	728112
Party	148472
Person	451626

Mr. Scott Smith
City Engineer
Engineering Division
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

SUBJECT: Action on Request for Clean Water Act Section 401 Water Quality Certification for the El Camino Real Detention Basin Project Water Quality Certification No. 08C-078

Dear Mr. Smith:

Enclosed is the Clean Water Act Section 401 Water Quality Certification for the **El Camino Real Detention Basin Project**. A description of the project and project location can be found in the project information sheet, project location map, and project site maps which are included as Attachments 1 through 5. 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 the City of Oceanside has accepted and will comply with all conditions of the Certification. Failure to comply with all conditions of this Certification may result in enforcement actions against the City of Oceanside.

The heading portion of this letter includes a Regional Board code number noted after "In reply, refer to:" In order to assist us in the processing of your correspondence please include these codes number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter.

If you have any questions regarding this notification, please call Mike Porter directly at (858) 467-2726 or via email at mporter@waterboards.ca.gov.

Respectfully,

JOHN H. ROBERTUS
Executive Officer

Mr. Smith
401 Certification 08C-078

August 6, 2009

Enclosure:

Clean Water Act Section 401 Water Quality Certification No. 08C-078 for the El Camino Real Detention Basin Project, with 5 attachments.

CC: Refer to Attachment 2 of Certification 08C-078 for Distribution List.

Linda S. Adams
Acting 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: El Camino Real Detention Basin Project
Water Quality Certification No. 08C-078

APPLICANT: Mr. Scott Smith
City Engineer
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

WDID	9 000001851
Reg. Measure	354035
Place	728112
Party	148472
Person	451626

ACTION:

☐ Order for Low Impact Certification	☐ Order for Denial of Certification
☑ Order for Technically-conditioned Programmatic 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 proposed project is the construction of two masonry walls, ranging in height from 6 to 25-feet tall, approximately 300-feet long in the floodplain of Loma Alta Creek, and connecting to an existing wall. These structures will serve to detain flood waters.

This project is the third and final phase of a larger, three phase project. Phase 1 was the replacement and expansion of the Coast Highway bridge with concrete box culverts in Loma Alta Creek, downstream of the Phase 2 project area. Phase 2 was the channelization of sections of Loma Alta Creek to provide up to a

40-year storm water elevation protection. Completion of Phase 3 project will provide up to a 100-year storm water elevation protection.

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, the City of Oceanside must satisfy the following:

A. GENERAL CONDITIONS:

1. The City of Oceanside must, at all times, fully comply with the engineering plans, specifications and technical reports submitted to the California Regional Water Quality Control Board, San Diego Region (Regional Board), to support this 401 Water Quality Certification and all subsequent submittals required as part of this certification and as described in Attachment 1. 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 Regional Board and reevaluation for individual Waste Discharge Requirements and/or certification amendment.

2. If project impacts have not been initiated within 5 years of issuance of this Certification, this Certification shall expire and another application for water quality certification will have to be submitted.

3. During construction activities, the City of Oceanside must maintain a copy of this certification at the project site so as to be available at all times to site personnel and agencies.

4. The City of Oceanside must permit the Regional 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.

5. The City of Oceanside must notify the Regional 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.

6. The City of Oceanside 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.

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 Regional 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 Regional 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 Regional Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

10. The City of Oceanside must submit annual progress reports to the Regional Board, prior to **August 1** of each year following the issuance of this certification, that reports on the status of the project until the project is completed.

B. Project Conditions:

1. Prior to the start of the project, and annually thereafter, the City of Oceanside must educate all personnel on the requirements in this certification, pollution prevention measures, spill response, and Best Management Practices implementation and maintenance.

2. The City of Oceanside 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/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf.

3. The City of Oceanside must notify the Regional Board in writing at least **5 days** prior to the actual commencement of construction.

4. 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.

C. Maintenance Best Management Practices:

1. Best Management Practices (BMPs) are described on page 3 of 6 in the Application for Clean Water Act § 401 Water Quality Certification for the El

Camino Real Detention Basin project, dated October 1, 2008. Proposed BMPs must include, but not be limited to:

a) Silt fencing (sediment control).
b) Straw wattles (erosion control).
c) Hydro-mulching (erosion control).
d) Straw blankets (erosion control).
e) Gravel bags (sediment control).
f) Staging areas and materials storage must occur outside of jurisdictional waters.
g) Staging area and material storage must be protected by erosion and sediment control BMPs.
h) Work performed during the wet season must be suspended during and after rain events until flood waters recede and soils are dry enough to work safely and without causing impacts to water quality.
i) All denuded and barren areas within temporary construction corridors must be re-vegetated with native vegetation to control erosion no later than one week after construction of the masonry walls.

D. MITIGATION

1. Permanent impacts must not exceed 0.09-acre (394-linear feet) of vegetated Waters of the U.S. and State for Phase 3 of the project. Temporary impacts must not exceed 0.15-acre (394-linear feet) of vegetated Waters of the U.S. and State for Phase 3 of the project.

2. Proposed mitigation is described within the Wetland Mitigation Plan for Loma Alta and Garrison Creek Detention Basins, prepared by RECON, and dated February 9, 2004. Total mitigation obligation for all three project phases will be the creation of 5.15-acres. Mitigation is located at the City of Oceanside's Loma Alta Flood Control Project Mitigation site. The 5.15-acres must be comprised of:

   a) Willow woodland 1.5-acres.
   b) Willow scrub 2.15-acres.
   c) Mule fat scrub 0.5-acre.
   d) Freshwater marsh 1.0-acre.

3. Within **90 days** of the issuance of this Certification, City of Oceanside must provide the Regional Board a draft preservation mechanism (e.g. deed restriction, conservation easement, etc.) that will protect all mitigation areas and their buffers in perpetuity. Within one year of the issuance of this Certification, the City of Oceanside must submit proof of a completed

preservation mechanism that will protect all mitigation areas and their buffers in perpetuity. Construction of the site must not be initiated until a completed preservation mechanism is received. The conservation easement, deed restriction, or other legal limitation on the mitigation property must be adequate to demonstrate that the site will be maintained without future development or encroachment on the site which could otherwise reduce the functions and values of the site for the variety of beneficial uses of waters of the U.S. that it supports. The legal limitation must prohibit, without exception, all residential, commercial, industrial, institutional, and transportation development, and any other infrastructure development that would not maintain or enhance the wetland and streambed functions and values of the site. The preservation mechanism must clearly prohibit activities that would result in soil disturbance or vegetation removal, other than the removal of non-native vegetation. Other infrastructure development to be prohibited includes, but is not limited to, additional utility lines, maintenance roads, and areas of maintained landscaping for recreation.

4. 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 5 percent of the onsite or offsite mitigation areas.

5. Any maintenance activities that do not contribute to the success of the mitigation site and enhancement of beneficial uses and ecological functions and services are prohibited. Maintenance activities are limited to the removal of trash and debris, removal of exotic plant species, replacement of dead native plant species and remedial measures deemed necessary for the success of the restoration program.

6. If at any time during the implementation and establishment of the mitigation area(s), and prior to verification of meeting success criteria, a catastrophic natural event (e.g., fire, flood) occurs and impacts the mitigation area, the City of Oceanside is responsible for repair and replanting of the damaged area(s).

7. Mitigation monitoring reports must be submitted annually until mitigation has been deemed successful by the Regional Board. Annual monitoring reports must be submitted prior to **December 1** of each year. Monitoring reports must include, but not be limited to, the following:

    a) Names, qualifications, and affiliations of the persons contributing to the report.

    b) Tables presenting the raw data collected in the field as well as analyses of the physical and biological data, including at a minimum.

c) Topographic complexity characteristics at each mitigation site.

d) Upstream and downstream habitat and hydrologic connectivity.

e) Source of hydrology.

f) Width of native vegetation buffer around the entire mitigation site.

g) Qualitative and quantitative comparisons of current mitigation conditions with pre-construction conditions and previous mitigation monitoring results.

h) Photodocumentation from established reference points.

i) A Survey report documenting boundaries of mitigation area.

8. Regional Board acceptance of the final mitigation plan applies only to the site and plan that mitigates for the El Camino Real Detention Basin 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 City of Oceanside's Loma Alta Flood Control Project Mitigation site for mitigation.

E. PRE-PROJECT AND POST-PROJECT PHOTO DOCUMENTATION PROCEDURE:

The City of Oceanside must conduct photo documentation of project areas before and after maintenance activities. Photo-documentation must be modeled after the State Water Resources Control Board Standard Operating Procedure 4.2.1.4: Stream Photo Documentation Procedure, included as Attachment 6. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced. The City of Oceanside must submit this information in a photo documentation report to the Regional Board no later than **30 days** after project completion at each site. The report must include a compact disc that contains digital files of all the photos (jpeg file type or similar).

F. GEOGRAPHIC INFORMATION SYSTEM REPORTING:

The City of Oceanside must submit Geographic Information System (GIS) shape files of the impact and mitigation areas within **30 days** of project impacts and the mitigation area within **30 days** of mitigation installation. All impact and mitigation areas shapefiles must be polygons. Two GPS readings (points) must be taken on each line of the polygon and the polygon must have a minimum of 10 points. GIS metadata must also be submitted.

G. 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 Regional Board for failure to furnish requested information pursuant to CWC section 13268.

2. All reports and information submitted to the Regional 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. All applications, reports, or information submitted to the Regional 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.

4. A duly authorized representative of a person designated in Items 3.a. through 3.c. above may sign documents if:

    a. The authorization is made in writing by a person described in Items 3.a. through 3.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 Regional Board Executive Officer.

5. All applications, reports, or information submitted to the Regional 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."

6. The City of Oceanside must submit reports required under this certification, or other information required by the Regional Board, to:

   Executive Officer
   California Regional Water Quality Control Board
   San Diego Region
   Attn: 401 Certification No. 08C-078
   9174 Sky Park Court, Suite 100
   San Diego, California 92123

7. Required Reports: The following list summarizes the reports, including spill notifications and emergency situations, required per the conditions of this Certification to be submitted to the Regional Board.

Report Topic	Certification Condition	Due Date(s)
Unauthorized Discharges	A.5. Report within 24 hours.	Within 24 hours.
Annual Progress Reporting	A.10. Submit annual progress reports.	Annually before August 1st.
Impacts to Waters	B.3. Notify before impacting Waters of U.S. and State.	5 Days prior to impacts.
Mitigation	D.3. Provide draft and final preservation mechanisms.	Within 90 days and one year of issuance of Certification.
Mitigation	D.7. Provide annual mitigation monitoring reports.	Prior to December 1 of each year after installation of mitigation site.
Photo Documentation	E. Provide photo documentation of project areas.	Within 30 days of project completion at each site.
GIS shapefiles	F. Submit GIS shapefiles of impacts and mitigation areas.	30 Days after impacts and 30 days after mitigation installation.

PUBLIC NOTIFICATION OF PROJECT APPLICATION:

On October 20, 2008 receipt of the project application was posted on the Regional Board web site to serve as appropriate notification to the public.

REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON:

Mike Porter
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123
858-467-2726
mporter@waterboards.ca.gov

WATER QUALITY CERTIFICATION:

I hereby certify that the proposed discharge from the **City of Oceanside** (Certification No. 08C-078) 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 Regional Board may issue individual 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 Regional Water Quality Control Board's Water Quality Control Plan (Basin Plan).

John H. Robertus

JOHN H. ROBERTUS
Executive Officer
Regional Water Quality Control Board

6 August 2009
Date

Attachments:

1. Project Information
2. Distribution List
3. Location Map
4. Site Maps
5. Mitigation Map
6. Stream Photodocumentation Procedure

ATTACHMENT 1
PROJECT INFORMATION

Applicant:

Mr. Scott Smith
City Engineer
Engineering Division
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054
Telephone: 760-435-5074
Facsimile: 760-435-6174
Email: ssmith@ci.oceanside.ca.us

Applicant Representatives:

Mr. Abraham Chen
Associate Engineer
Engineering Division
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054
Telephone: 760-435-5121
Facsimile: 760-435-6121
Email: amchen@ci.oceaside.ca.us

Project Name:

El Camino Real Detention Basin Project,
Certification 08C-068

Project Location:

The project is located southeast and adjacent to the intersection of El Camino Real and Oceanside Boulevard, north of and in the floodplain of Loma Alta Creek, City of Oceanside, north-coastal San Diego County.

Type of Project:

Flood control.

Project Description:

The proposed project is the construction of two masonry walls, ranging in height from 6 to 25-feet tall, approximately 300-feet long in the floodplain of Loma Alta Creek, and connecting to an existing wall. These structures will serve to detain flood waters.

This project is the third and final phase of a larger, three phase project. Phase 1 was the replacement and expansion

of the Coast Highway bridge with concrete box culverts in Loma Alta Creek, downstream of the Phase 2 project area. Phase 2 was the channelization of sections of Loma Alta Creek to provide up to a 40-year storm water elevation protection. Completion of Phase 3 project will provide up to a 100-year storm water elevation protection.

Project Purpose:	The purpose of the project is to reduce flooding potential to nearby businesses.
Federal Agency/Permit:	U.S. Army Corps of Engineers §404, Individual Permit, Ms. Crystel Doyle.
Other Required Regulatory Approvals:	California Department of Fish and Game, §1602 Streambed Alteration Agreement, Ms. Tamara Spear.
California Environmental Quality Act (CEQA) Compliance:	Loma Alta Creek Flood Control Project, Subsequent Environmental Impact, March 1999, City of Oceanside SCH # 1998031129.
Receiving Waters:	Loma Alta Creek floodplain, Carlsbad hydrologic unit, Loma Alta hydrologic area (904.10).

Affected Waters of the United States and State:

Temporary:

Wetland	0.15-acre, 394-linear feet
Streambed	None
Lake	None
Ocean	None

Permanent:

Wetland	0.09-acre, 394-linear feet
Streambed	None
Lake	None
Ocean	None

Dredge Volume: None

Related Projects Implemented/to be Implemented by the Applicant(s):	Project phases 1 and 2 have been implemented and mitigated for.
Compensatory Mitigation:	Proposed mitigation is described within the Wetland Mitigation Plan for Loma Alta and Garrison Creek Detention Basins, prepared by RECON, and dated February 9, 2004. Total mitigation obligation for all three project phases is the creation of 5.15-acres. The 5.15-acres is comprised of: ▪ Willow woodland 1.5-acres. ▪ Willow scrub 2.15-acres. ▪ Mule fat scrub 0.5-acre. ▪ Freshwater marsh 1.0-acre. The mitigation obligation for Phase three of the project is 1.20-acres. The 1.20-acres is part of the 5.15-acres mitigation area. The 1.20-acres is mathematically-derived from the sum of the impacts for this phase (0.15-acre + 0.09-acre) times a mitigation ratio of 5:1. Mitigation is located at the City of Oceanside's Loma Alta Flood Control Project Mitigation site. Mitigation was completed in 2005 and is now in year 4 of monitoring and maintenance. The mitigation site is meeting its success criterion.
Best Management Practices:	Best Management Practices (BMPs) are described on page 3 of 6 in the Application for Clean Water Act § 401 Water Quality Certification for the El Camino Real Detention Basin project, dated October 1, 2008. Proposed BMPs include: 1. Silt fencing (sediment control). 2. Straw wattles (erosion control). 3. Hydro-mulching (erosion control). 4. Straw blankets (erosion control). 5. Gravel bags (sediment control). 6. Staging areas and materials storage outside of jurisdictional waters. 7. Staging area and material storage will be protected by erosion and sediment control BMPs.

8. Work performed during the wet season will be suspended during and after rain events until flood waters recede and soils are dry enough to work safely and without causing impacts to water quality.
9. All denuded and barren areas within temporary construction corridors will be re-vegetated with native vegetation to control erosion.

Public Notice: October 20, 2008 – Regional Board website

Fees:

Total Due:	$3,162.00	
Total Paid:	$2,470.00	(Check No. 1017972)
	$692.00	(Check No. 1032018)

CIWQS:

Regulatory Measure:	351035
Place:	728112
Party:	148472

ATTACHMENT 2
DISTRIBUTION LIST

Ms. Crystal Doyle
U.S. Army Corps of Engineers
San Diego Field Office
6010 Hidden Valley Road
Suite 105
Carlsbad, CA 92011

Ms. Tamara Spear
California Department of Fish and Game
South Coast Region
Habitat Conservation Planning – North
4949 Viewridge Avenue
San Diego, CA 92123

Mr. Eric Raffini
Wetlands Regulatory Office
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105
R9-WTR8-Mailbox@epa.gov

Mr. Abraham Chen,
Associate Engineer
Engineering Division
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

State Water Resources Control Board
Division of Water Quality
401 Water Quality Certification and Wetlands Unit
P.O. Box 100
Sacramento, CA 95812-0100
Stateboard401@waterboards.ca.gov

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

ATTACHMENT 3

Location Map

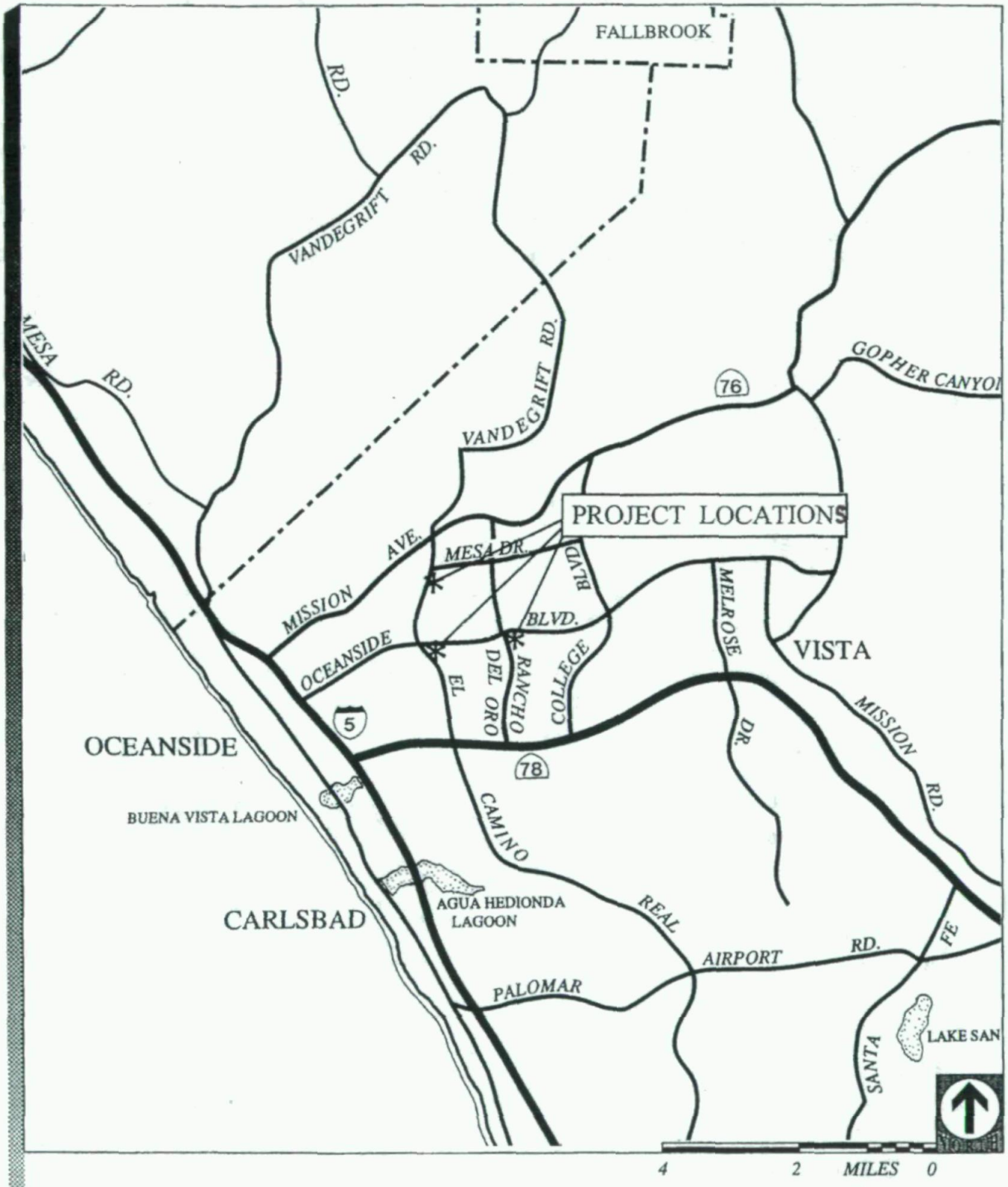
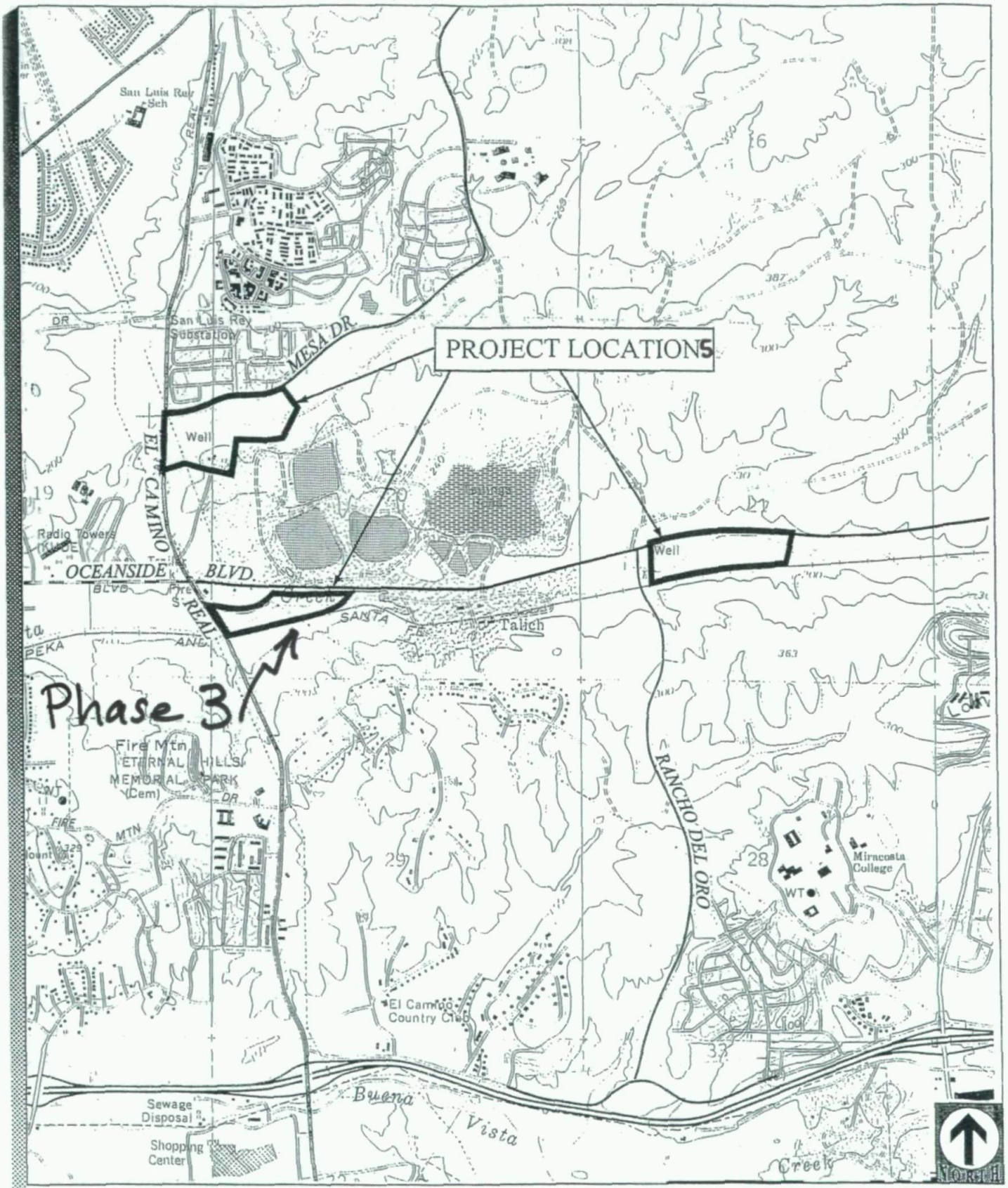


FIGURE 2-1

Regional Location of the Project

ATTACHMENT 4

Site Maps

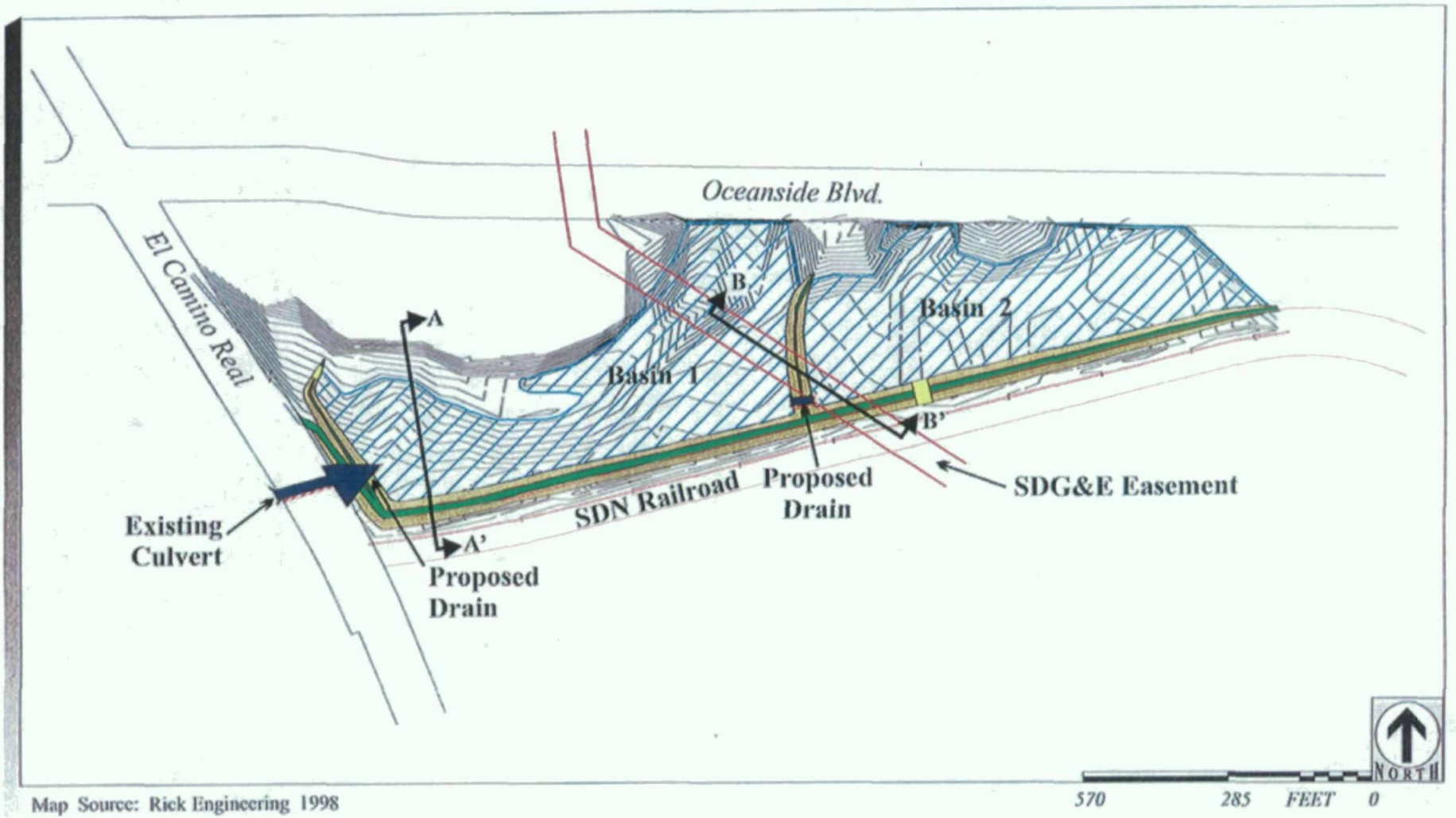


Map Source: U.S.G.S. 7.5 minute topographic map, San Luis Rey quadrangle

FIGURE 1

Project Location

RECON



Map Source: Rick Engineering 1998

Top of proposed berm

Slope of proposed berm

Proposed spillway

Drains

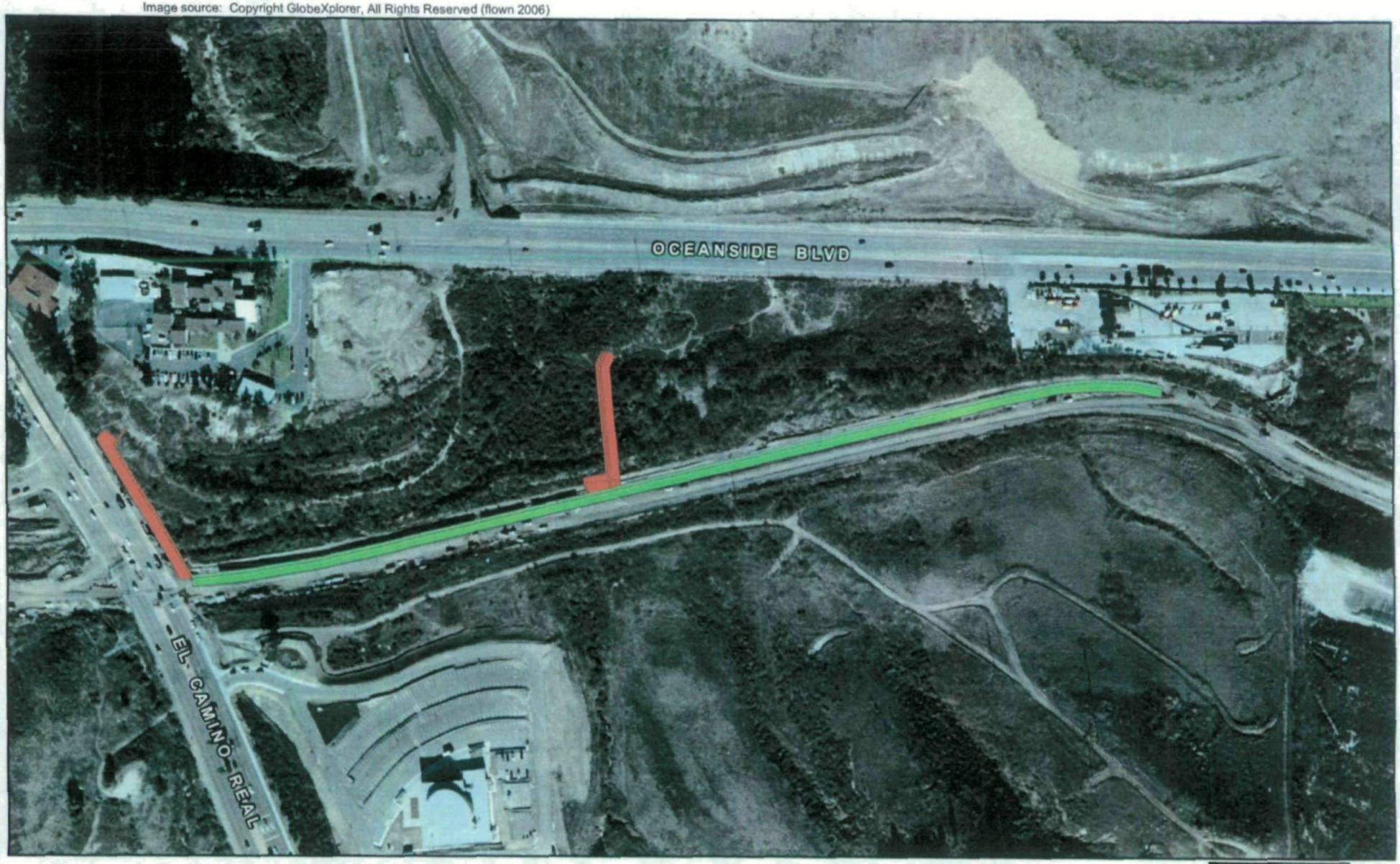
Limits of Inundation

M:\jobs\2998\graphics\ocnsde-bsn

FIGURE 3-2

Proposed El Camino Real/
Oceanside Boulevard Detention Basins

RECON



Detention Basin Walls

- Existing Wall (built under previous 404)
- Walls to be built (approved under previous 404)

RECON

M:\jobs\2998\gis\fig1_401.mxd 09/24/08

FIGURE 1

Location of Detention Basin Walls

RECON

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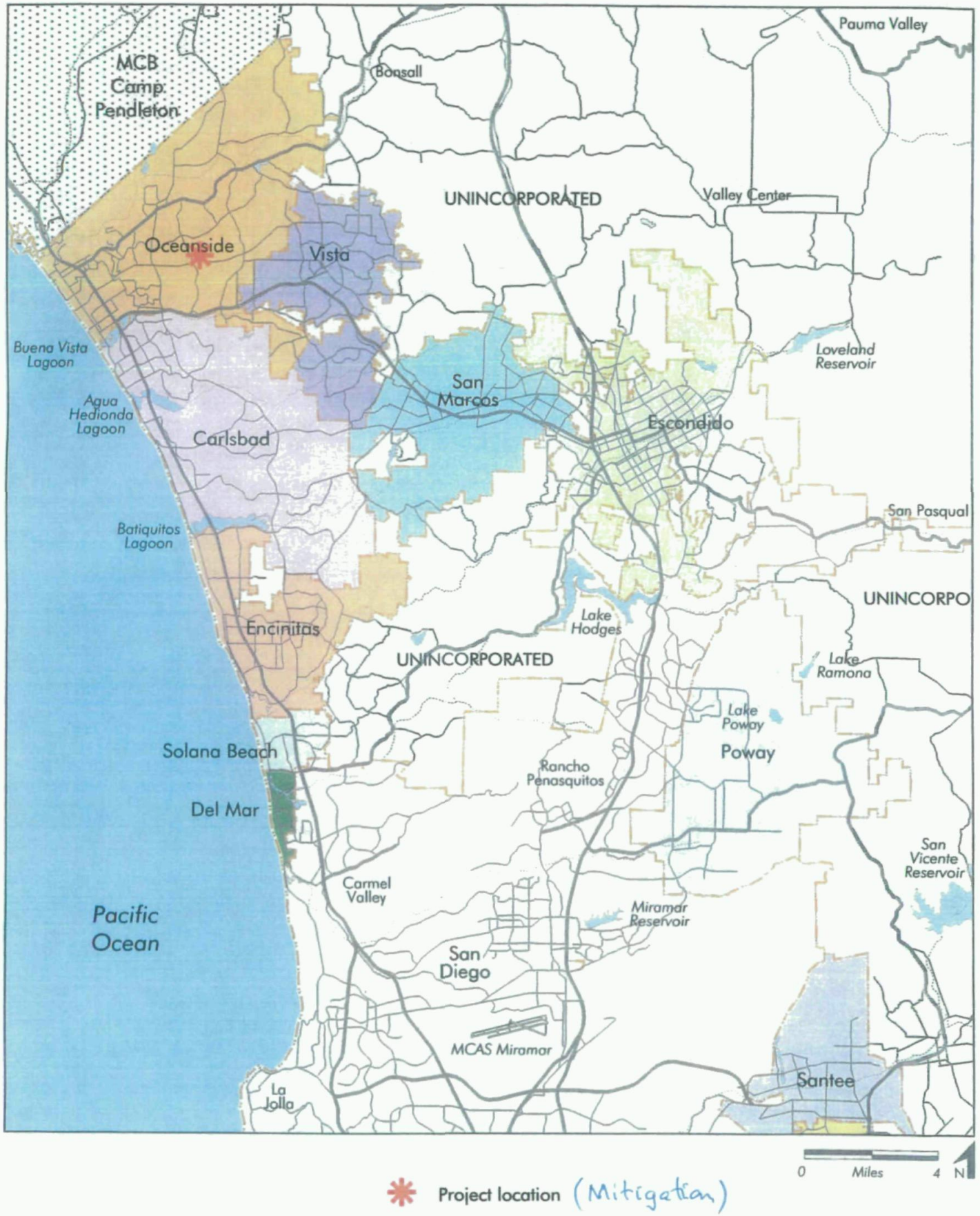
FIGURE 2

Vegetation Impacts

ATTACHMENT 5

MITIGATION MAPS



RECON

M:\jobs\2998\gis\mitigation.apr\
fig1 (regl) 02/06/04

FIGURE 1
Regional Location

Image source: Copyright 2008 GlobeXplorer, All Rights Reserved (flown Jan 2008)

Mitigation Site Boundary

Transect Locations

Photo Location Points

FIGURE 3

Location of Mitigation Site, Transects, and Photo Location Points

RECON

ATTACHMENT 6

STREAM PHOTO DOCUMENTATION PROCEDURE

Standard Operating Procedure (SOP) 4.2.1.4

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 focal length 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:

SENDER: *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.

1. Article Addressed to:

Scott Smith
Engineering Division
City of Oceanside
Oceanside, CA
92054

COMPLETE THIS SECTION ON DELIVERY

A. 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

2. Article Number
(Transfer from service label) 7009 0080 0000 7308 0585

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