

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

2375 Northside Drive, Suite.100, San Diego, CA 92108  
Phone (619) 516-1990 • Fax (619) 516-1994  
<http://www.waterboards.ca.gov/sandiego/>

**Amendment No. 3 to Clean Water Act Section 401  
Water Quality Certification No. 08C-023**

**PROJECT: City of Solana Beach  
Opportunistic Beach Restoration Program  
Certification Number 08C-023  
WDID: 9000001771**

Reg. Meas. ID: 344241  
Place ID: 716431  
Party ID: 41410  
Person ID: 466213

**APPLICANT: City of Solana Beach  
635 South Highway 101  
Solana Beach, CA 92123**

On March 4, 2009, Clean Water Act Section 401 Water Quality Certification No. 08C-023 (Certification) was issued to the City of Solana Beach (Applicant) for the City of Solana Beach Opportunistic Beach Restoration Program (Project).

On March 4, 2009, Certification No. 08C-023 was issued to the Applicant and on April 4, 2009 the Certification was amended to clarify the sediment size that can be placed on the beach. By letter dated May 20, 2013, the Applicant requested the Certification expiration date be extended five years because of delays associated with budgetary constraints which deferred initiating project activities. On October 24, 2013, the Certification was extended another five years and set to expire on March 4, 2019.

By letter dated June 15, 2018, the Applicant requested the Certification be amended to extend the expiration date for another five years. No work has been conducted under this Certification.

Based on the Applicant's request, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is amending the Certification to extend the expiration date another five years. Except as modified or superseded by the Amended Certification modifications set forth below, all of the findings, provisions and other requirements of Certification No. 08C-023, 08C-023 Amendment 1, and 08C-023 Amendment 2 remain in full force and effect

The following changes are made to Certification No. 08C-023 and are shown in underline/strikeout format to indicate added and removed language:

**1. Page 4, ADDITIONAL CONDITION B.2 is replaced with the following:**

The requirements of this Certification are enforceable through 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 (Water Quality Order No. 2003-0017-DWQ). This provision shall apply irrespective of whether a) the federal permit for which the Certification was obtained is subsequently retracted or is expired, or b) the Certification is expired. Water Quality Order No. 2003-0017-DWQ is accessible at:

[http://www.waterboards.ca.gov/water\\_issues/programs/cwa401/docs/generalorders/go\\_wdr401regulated\\_projects.pdf](http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf)

**2. Page 5, ADDITIONAL CONDITION C has been modified as follows:**

The proposed project must be implemented as described in the application. This certification is valid until March 4, ~~2019~~ 2024. The proposed project must place not more than 150,000 cubic yards of sediment per year. A Sampling and Analysis Plan must be submitted for acceptance before each placement. Based on the results of the Sampling and Analysis plan, it will be decided case by case if the sediment must be placed below mean high tide line, or if the sediment can be placed as a beach berm. The sediment that will be placed on the beach must have less than 10% sand difference from the receiving beach and no negative aesthetic impact on the receiving beach.

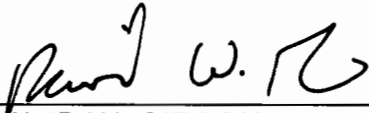
**3. ADDITIONAL CONDITION H.7 is replaced with the following:**

**Electronic Document Submittal.** The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to [SanDiego@waterboards.ca.gov](mailto:SanDiego@waterboards.ca.gov). Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to:

California Regional Water Quality Control Board  
San Diego Region  
Attn: 401 Certification No. 08C-023:716431:amonji  
2375 Northside Drive, Suite 100  
San Diego, California 92108

Each electronic document must be submitted as a single file, in Portable Document Format (PDF), and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: Certification No. 08C-023:716431:amonji.

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Amendment No. 3 to Certification No. 08C-023 issued on December 26, 2018.



---

DAVID W. GIBSON  
Executive Officer  
San Diego Water Board

26 December 2018  
Date





**California Regional Water Quality Control Board, San Diego Region**

October 24, 2013

**In reply refer to:**  
716431: amonji

David Ott  
City Manager  
City of Solana Beach  
201 N. Broadway  
Solana Beach, CA 92075

**Subject: Amendment No. 2 to Water Quality Certification No. 08C-023 for the City of Solana Beach Opportunistic Beach Restoration Program**

Mr. Ott:

Enclosed is Amendment No. 2 to Clean Water Act section 401 Water Quality Certification No. 08C-023 (Certification Amendment No. 2) for the City of Solana Beach Opportunistic Beach Restoration Program (SCOUP). Certification Amendment No. 2 shows changes in redline/strikeout format to indicate added and removed language. Water Quality Certification No. 08C-023 and Amendment No. 1 are enclosed for your reference.

On March 4, 2009, Water Quality Certification No. 08C-023 was issued to the City of Solana Beach (City) and on April 4, 2009 the Certification was amended to clarify the sediment size that can be placed on the beach. By letter dated May 20, 2013, the City requested the Certification expiration date be extended an additional five years because of delays associated with budgetary constraints which deferred initiating project activities.

The current term of the Certification is from March 4, 2009 through March 4, 2014. Based on the City's request, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is amending the Certification to extend the term an additional five years through March 4, 2019.

Any petition for reconsideration of Certification Amendment No. 2 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 the Certification and Addenda.

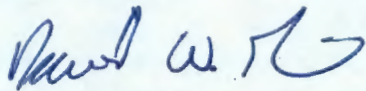
Failure to comply with all conditions of the Certification and Addenda may subject the City to enforcement actions by the San Diego Water Board, including administrative enforcement orders requiring you to cease and desist from violations, or to clean up waste and abate existing or threatened conditions of pollution or nuisance; administrative civil liability in

October 24, 2013

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 reference number 229504:amonji. For questions or comments, please contact Alan Monji by phone at (619) 521-3968, or by email at [amonji@waterboards.ca.gov](mailto:amonji@waterboards.ca.gov).

Respectfully,



David W. Gibson,  
Executive Officer  
Regional Water Quality Control Board

DG:js:db:kdd:atm:ap

Enclosures:

Amendment No. 2 to Clean Water Act Section 401 Water Quality Certification No. 08C-023,  
September 09, 2013

Amendment No. 1 to Clean Water Act Section 401 Water Quality Certification No. 08C-023,  
April 22, 2009

Clean Water Act Section 401 Water Quality Certification No. 08C-023, City of Solana Beach  
Opportunistic Beach Restoration Program Project

cc: (via email)

Leslea Meyerhoff  
City of Solana Beach  
[Lmeyerhoff@cosb.org](mailto:Lmeyerhoff@cosb.org)

Brian Leslie  
Moffatt & Nichol  
[bleslie@moffattnichol.com](mailto:bleslie@moffattnichol.com)

Robert R. Smith  
U.S. Army Corps of Engineers  
Regulatory Division  
[Robert.R.Smith@usace.army.mil](mailto:Robert.R.Smith@usace.army.mil)

Loni Adams  
California Department of Fish and Wildlife  
[Loni.Adams@wildlife.ca.gov](mailto:Loni.Adams@wildlife.ca.gov)

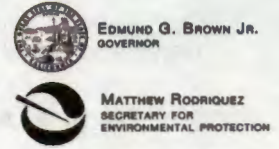
City of Solana Beach  
Opportunistic Beach Restoration Program  
Certification No. 08C-023, Amendment No. 2

October 24, 2013

State Water Resources Control Board  
Division of Water Quality  
401 Water Quality Certification and Wetlands  
[Stateboard401@waterboards.ca.gov](mailto:Stateboard401@waterboards.ca.gov)

U.S. EPA, OWOW, Region 9  
75 Hawthorne St.  
San Francisco, CA 94105  
[R9-WTR8-Mailbox@epa.gov](mailto:R9-WTR8-Mailbox@epa.gov)

Tech Staff Info & Use	
File No.	08C-023
WIDID	9 000001771
Reg. Measure ID	344241
Place ID	716431
Party ID	466213



California Regional Water Quality Control Board, San Diego Region

Amendment No. 2 to Clean Water Act Section 401
Water Quality Certification No. 08C-023

PROJECT: City of Solana Beach Opportunistic Beach Restoration Program
Water Quality Certification No. 08C-023

APPLICANT: City of Solana Beach
201 N. Broadway
Solana Beach, CA 92075

Table with 2 columns: ID Type and Value. Includes File No., WDID, Reg. Measure ID, Place ID, and Party ID.

The following changes have been made to Clean Water Act section 401 Water Quality Certification No. 08C-023, City of Solana Beach Opportunistic Beach Restoration Program. Changes below are shown in redline/strikeout format to indicate added and removed language.

1. Page 1, STANDARD CONDITIONS are replaced with the following:

Pursuant to section 3860 of Title 23 of the California Code of Regulations (23 CCR), the following three standard conditions apply to all water quality certification actions:

- 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 Water Code and Article 6 (commencing with section 3867 of 23 CCR).
2. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility and 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 that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. This Certification action is conditioned upon total payment of any fee required under chapter 28 (commencing with section 3830) of 23 CCR and owed by the applicant.



**2. Page 4, ADDITIONAL CONDITION B.4 has been modified as follows:**

The City of Solana Beach must comply with the requirements of State Water Resources Control Board Water Quality Order No. ~~99-08-DWQ~~ 2009-0009-DWQ, ~~the NPDES General Permit for Storm Water Discharges Associated with Construction Activity. National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.~~

**3. Page 5, ADDITIONAL CONDITION C has been modified as follows:**

The proposed project must be implemented as described in the application. This certification is valid until March 4, 2019 ~~five years~~. The proposed project must place not more than 150,000 cubic yards of sediment per year, ~~for 5 years~~. A Sampling and Analysis Plan must be submitted for acceptance before each placement. Based on the results of the Sampling and Analysis plan, it will be decided case by case if the sediment must be placed below mean high tide line, or if the sediment can be placed as a beach berm. The sediment that will be placed on the beach must have less than 10% sand difference from the receiving beach and no negative aesthetic impact on the receiving beach.

**4. Page 5, ADDITIONAL CONDITION C.3.a has been modified as follows:**

*a. California Grunion (Leuresthes tenuis)*

~~The project proposes to place sediment on the beach from March 1 to August 31; therefore the City of Solana Beach must determine beach habitat suitability for grunion spawning. The applicant must comply with the Special Condition NO.6 of the Regional General Permit 67 Beach Nourishment in Southern California (Corps File No. 200401896-JLB).~~

i. California grunion is a State managed species and the intertidal zone at the disposal sites are potential spawning habitat. To the greatest extent possible, the City of Solana Beach must avoid shoreline fill activities during the grunion spawning season (March 15 – August 31). If shoreline disposal activities must occur during grunion spawning season, the City of Solana Beach must conduct a preconstruction survey of potential grunion spawning habitat at each proposed beach disposal site.

a) The preconstruction survey must be conducted by a biological monitor no more than one month prior to the expected start date of the shoreline dredged material disposal activities and must include photo documentation.

b) The biological monitor shall determine whether the shoreline discharge areas are unsuitable for use as spawning habitat for grunion. Unsuitable habitat includes cobble beaches, beaches that are inundated during high tides to the extent that no beach above the high

tide water mark is available for grunion spawning, beaches that do not have enough sand substrate for the grunion to bury eggs, and beaches with no historic grunion runs.

- ii. If shoreline disposal activities must occur between March 15 – August 31 and suitable grunion habitat is located at the beach disposal areas, the City of Solana Beach must avoid and minimize potential impacts to grunion by complying with the following conditions:
  - a) Shoreline dredged material disposal activities that entail sand disturbance seaward of the semilunar high tide line may be conducted on the day before the first date of a predicted run series. This day constitutes a narrow window of time during which egg nests and developing larvae are unlikely to be present in the sand; larvae from the previous run series likely would have been flushed by the previous night's high tide, and new eggs likely won't be deposited for at least 24 hours. Consult the California Department of Fish and Wildlife (CDFW) website for predicted run series events and plan accordingly (<http://www.dfg.ca.gov/marine/grunionschedule.asp>).
  - b) To conduct dredged material disposal activities between the dates in item ii above, a biological monitor, must survey for the presence of adult grunion during the predicted grunion runs prior to the disposal activities. Monitoring must be done on all four nights of the predicted run series, except if grunions are observed spawning within the work area or a 10-yard buffer area between the grunion spawn site and the work area on a given night, the presence of egg nests may be assumed and surveys on subsequent nights are not required. For example, if grunion are observed in the work area or the 10-yard buffer on night one, then monitoring on nights two, three, and four would not be required. If grunion are not observed within the work area or the 10-yard buffer on night one, then night two would be surveyed.
  - c) Monitoring must occur from the time of the high tide to two hours following the tide or until the grunion stop running, whichever is later. For each night of monitoring, recorded information must include the time period monitored, grunion run time and duration, approximate grunion density within the work area and 10-yard buffer, and approximate grunion density in a broader area (i.e., within approximately 50 yards up-coast or 50 yards down-coast of the work area).
  - d) If grunion spawning is observed within the work area or the 10-yard buffer on any night of a four-day run series, then spawning areas must be clearly marked and avoided by heavy equipment and machinery until after the egg incubation period (i.e., until the day before the first date of the next predicted run).

- e) If grunion spawning is not observed within the work area or 10-yard buffer on all four nights of a predicted run series, then the absence of egg nests and incubation activity near the work area may be assumed and, if needed, project activity that entails sand disturbance may be conducted seaward of the semilunar high tide line up to and including the day before the date of the next predicted run.
- iii. Where shoreline discharge area is currently unsuitable for use as spawning habitat for grunion, beach disposal may occur in the designated areas without a biological monitor.

**5. Page 9, ADDITIONAL CONDITION H.7 has been modified as follows:**

Executive Officer  
California Regional Water Quality Control Board, San Diego Region  
Attn: 401 Certification; Project No. 08C-023  
~~9174 Sky Park Court~~ 2375 Northside Drive, Suite 100  
San Diego, CA ~~92123~~ 92108

**6. Page 10, REGIONAL WATER QUALITY BOARD CONTACT PERSON has been modified as follows:**

~~Lilian Busse~~ Alan Monji  
California Regional Water Quality Control Board, San Diego Region  
~~9174 Sky Park Court~~ 2375 Northside Drive, Suite 100  
San Diego, CA ~~92123~~ 92108  
~~858-467-2974~~ (619) 521-3968  
lbusseAlan.Monji@waterboards.ca.gov

**7. ATTACHMENT 2, Distribution List has been modified as follows:**

Brian Leslie  
Moffatt & Nichol  
1660 Hotel Circle, Suite 200  
San Diego, CA 92108  
bleslie@moffattnichol.com

Robert R. Smith  
U.S. Army Corps of Engineers  
Regulatory Branch  
~~16885 W. Bernardo Dr., Suite 300-A~~  
~~San Diego, CA 92127~~  
5900 La Place Court, Suite 100  
Carlsbad, CA 92008  
PH: (760) 602-4837  
Robert.R.Smith@usace.army.mil

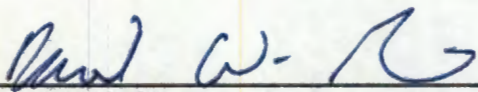
~~U.S. Army Corps of Engineers  
Regulatory Branch  
P.O. Box 532711  
Los Angeles, CA 90053-2325  
(213) 452-4196 (fax)~~

Loni Adams  
California Department of Fish and Wildlife  
3883 Ruffin Rd  
San Diego, CA 92123  
Tel: (858) 627.3985  
Loni.Adams@wildlife.ca.gov

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

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Amendment No.2 to Certification No. 08C-023 issued on October 24, 2013

  
\_\_\_\_\_  
David W. Gibson  
Executive Officer  
Regional Water Quality Control Board

10-18-2013  
\_\_\_\_\_  
Date



# California Regional Water Quality Control Board

## San Diego Region



Linda S. Adams  
Secretary for  
Environmental  
Protection

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

Arnold Schwarzenegger  
Governor

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

April 22, 2009

In reply refer to: WPC:08C-023:LBUSSE  
Certified Mail:  
7009 0080 0000 7308 0356

Leslea Meyerhoff  
City of Solana Beach  
635 South Highway 101  
Solana Beach, CA 92075

CIWQS
Reg. Mes. ID: 344241
Place ID: 716431
Party ID: 41411

**RE: Amendment of the 401 water quality certification for the City of Solana Beach Opportunistic Beach Restoration Program (Certification Number 08C-023) – Minor changes to Section C.1.d., Definition of fine grain sediment**

Dear Ms. Meyerhoff:

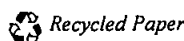
The California Regional Water Quality Control Board San Diego Region (Regional Board) is amending the 401 Water Quality Certification (Certification) for the City of Solana Beach Opportunistic Beach Restoration Program (08C-023). This decision is based on the materials provided in your April 2, 2009 submittal. This amendment is needed to precisely define the size of the fine grained sediment that will be placed on the beach for the proposed project. The new definition of fine grained sediment is consistent with the RGP 67, and with the Sand Compatibility and Opportunistic Use Program. Changes to the Certification are shown in strikeout and bold underline below.

Additional Conditions:

Section C.1.d.

The sediment must contain no more than 10% of fine grained sediment. Fine grained sediment is defined as particles that are **smaller than 0.074 millimeters or pass through the #200 sieve.** ~~between 0.250 mm and 0.125 mm.~~ **A** ~~However, a~~ maximum of 25,000 cubic yards per year of **sediment (with fines between 11% and 25%) may also be placed on the beach** ~~fine-grained sediment (11%–25%) between September and February can be placed on the beach.~~

*California Environmental Protection Agency*



4 / 22 / 2009

Ms. Leslea Meyerhoff

- 2 -

April 22, 2009

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 this code 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 letter, please contact Lilian Busse at 858-467-2971 or lbusse@waterboards.ca.gov.

Respectfully,



John H. Robertus  
Executive Officer  
San Diego Regional Water Quality Control Board

CC:

Brian Leslie  
Moffatt & Nichol  
1660 Hotel Circle, Suite 200  
San Diego, CA 92108

State Water Resources Control Board, Division of Water Quality  
401 Water Quality Certification and Wetlands Unit  
Attn: Bill Orme  
P.O. Box 100  
Sacramento, CA 95812-0100

U.S. Army Corps of Engineers  
Regulatory Branch  
16885 W. Bernardo Dr., Suite 300 A  
San Diego, CA 92127  
(858) 674-5388 (fax)

U.S. Army Corps of Engineers  
Regulatory Branch  
P.O. Box 532711  
Los Angeles, CA 90053-2325  
(213) 452-4196 (fax)

*California Environmental Protection Agency*



# California Regional Water Quality Control Board

## San Diego Region

Linda S. Adams  
Secretary for  
Environmental  
Protection

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(858) 467-2952 • Fax (858) 571-6972  
[http:// www.waterboards.ca.gov/sandiego](http://www.waterboards.ca.gov/sandiego)



Arnold  
Schwarzenegger  
Governor

March 4, 2009

In reply refer to: WPS:08C-066:LBUSSE

Leslea Meyerhoff  
City of Solana Beach  
635 South Highway 101  
Solana Beach, CA 92075

RECEIVED

MAR 19 2009

DIVISION OF WATER QUALITY

WDID 9 000001771  
CIWQS:  
Party No. 41411  
Place No. 716431  
Reg. M. No. 344241

**SUBJECT: Action on Request for Clean Water Act Section 401 Water Quality Certification for the City of Solana Beach Opportunistic Beach Restoration Program, Water Quality Certification No. 08C-023**

Dear Ms. Meyerhoff:

Enclosed find Clean Water Act Section 401 Water Quality Certification (Certification) for discharge to waters of the U.S. for the City of Solana Beach Opportunistic Beach Restoration Program. A description of the project and location can be found in the project information sheet, location map, and site maps, by the California Regional Water Quality Control Board, San Diego Region (Regional Board), 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 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 Regional Board, 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.

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 this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter.

*California Environmental Protection Agency*

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>.*

Recycled Paper



3/4/2009





Ms. Meyerhoff  
City of Solana Beach Opportunistic Beach Restoration Program  
401 Certification 08C-023

2

March 4, 2009

If you have any questions regarding this notification, please contact Lilian Busse directly at 858-467-2971 or by email via [lbusse@waterboards.ca.gov](mailto:lbusse@waterboards.ca.gov).

*busse*

Respectfully,




JOHN H. ROBERTUS  
Executive Officer

Enclosure:

Clean Water Act Section 401 Water Quality Certification No. 08C-023 for the City of Solana Beach Opportunistic Beach Restoration Program, with 5 attachments

cc: Refer to Attachment 2 of Certification 08C-023 for Distribution List.

*California Environmental Protection Agency*

 Recycled Paper

3 / 4 / 2009





Linda S. Adams  
Acting Secretary for  
Environmental  
Protection

# 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



Arnold  
Schwarzenegger  
Governor

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

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: City of Solana Beach Opportunistic Beach Restoration  
Program  
Certification Number (08C-023), WDID Number 9 000001771**

**APPLICANT Leslea Meyerhoff  
City of Solana Beach  
635 South Highway 101  
Solana Beach, CA 92075**

CIWQS
Reg. Mes. ID: 344241
Place ID: 716431
Party ID: 41411

**ACTION:**

<input type="checkbox"/> Order for Low Impact Certification	<input type="checkbox"/> Order for Denial of Certification
<input checked="" type="checkbox"/> Order for Technically-conditioned Certification	<input type="checkbox"/> Waiver of Waste Discharge Requirements
<input checked="" type="checkbox"/> Enrollment in SWRCB GWDR Order No. 2003-017 DWQ	<input type="checkbox"/> Enrollment in Isolated Waters Order No. 2004-004 DWQ

**PROJECT DESCRIPTION:**

The project proposes to place a maximum of 150,000 cubic yards per year (for five years) of beach-quality sand from upland or dredging projects on Fletcher Cove Park in the City of Solana Beach. The material will include up to 25,000 cubic yards per year of fine-grained sediment (11% - 25%) between September and February. The material placed on the beach will provide erosion control, recreational benefits, and habitat enhancement.

**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

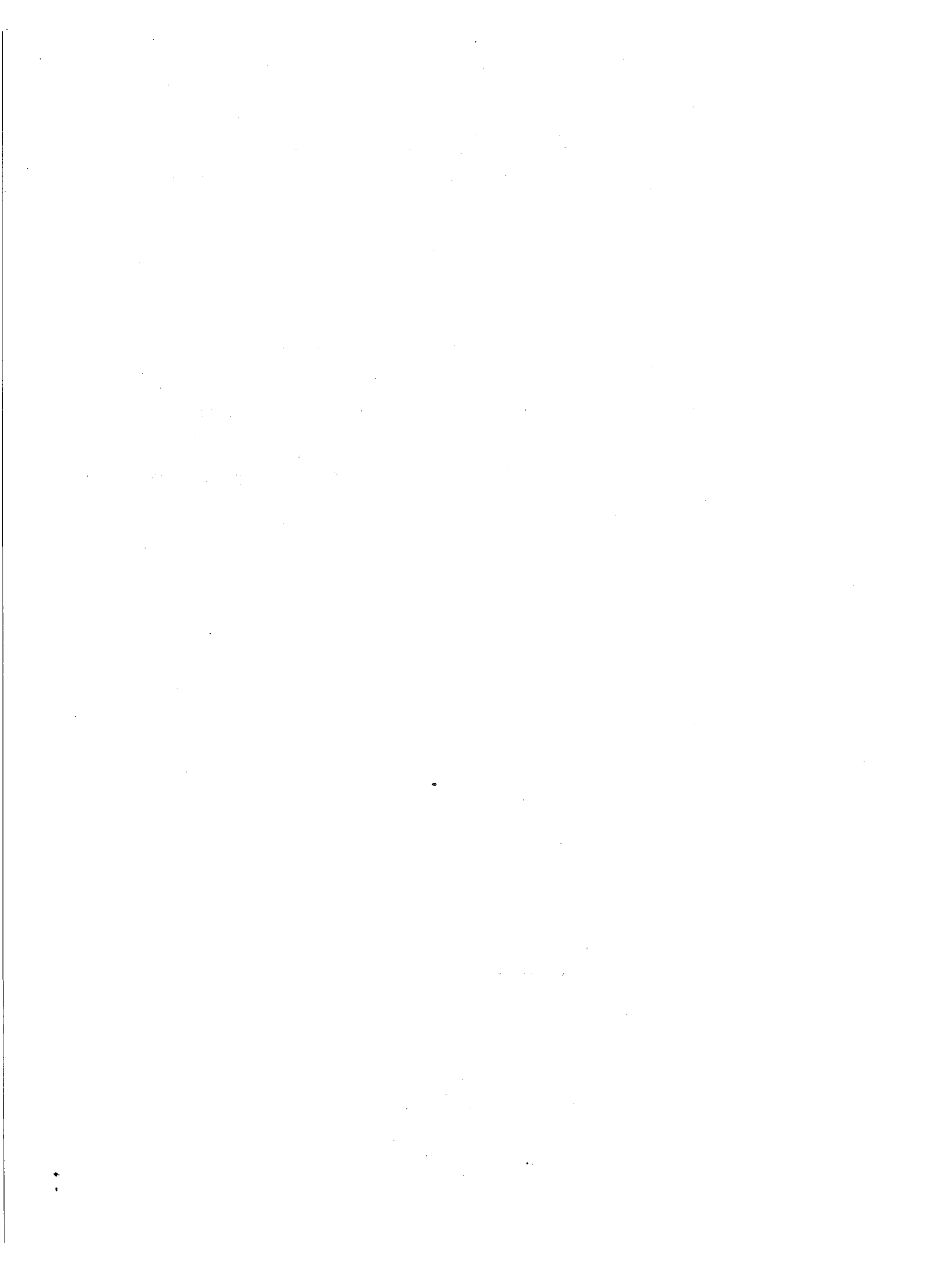
***California Environmental Protection Agency***

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>.*

Recycled Paper



6007 / P / E  
3 / 4 / 2009



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 Solana Beach must satisfy the following:

**A. GENERAL CONDITIONS:**

1. The City of Solana Beach 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. During construction, the City of Solana Beach 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. The City of Solana Beach 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.



4. The City of Solana Beach 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.
5. The City of Solana Beach 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 to any person except after notice to the Executive Officer of the Regional Board. The City of Solana Beach must notify the Regional Board of any change in ownership of the project area. Notification must include, but not be limited to, a statement that the property owner has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands the permit requirements and must implement them; the seller and purchaser must sign and date the notification. The notification for transfer of mitigation responsibility must include a signed statement from the new party demonstrating acceptance and understanding of the responsibility to meet the mitigation conditions and applicable requirements of the Certification. Notification must be provided within 10 days of the sale of the property.
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 Solana Beach and successor owners must submit annual progressive reports to the Regional 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, the City of Solana Beach must educate all personnel on the requirements in this certification, pollution prevention measures, spill response, and BMP implementation and maintenance.
2. The City of Solana Beach 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](http://www.waterboards.ca.gov/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf).
3. The City of Solana Beach must notify the Regional Board in writing at least 5 days prior to the actual commencement of dredge, fill, and discharge activities.
4. The City of Solana Beach must comply with the requirements of State Water Resources Control Board Water Quality Order No. 99-08-DWQ, the NPDES General Permit for Storm Water Discharges Associated with Construction Activity.
5. 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.
6. 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.
7. The City of Solana Beach must submit a notification to the Regional Board within 30 days of completion of the project. The final report should include photos of the completed project.



### C. PLACEMENT OF SEDIMENT

The proposed project must be implemented as described in the application. This certification is valid five years. The proposed project must place not more than 150,000 cubic yards of sediment per year, for 5 years. A Sampling and Analysis Plan must be submitted for acceptance before each placement. Based on the results of the Sampling and Analysis plan, it will be decided case by case if the sediment must be placed below mean high tide line, or if the sediment can be placed as a beach berm. The sediment that will be placed on the beach must have less than 10% sand difference from the receiving beach and no negative aesthetic impact on the receiving beach.

#### 1. Sediment Quality

All sediment must be tested for hazardous wastes and material, and grain size distribution. All sediment that has potential sources of biostimulatory substances and bacteria, must be tested for biostimulatory substances and bacteria.

##### *a. Biostimulatory Substances*

The sediment must not contain biostimulatory substances in concentrations that exceed natural background levels.

##### *b. Hazardous Wastes and Material*

The sediment must not contain hazardous wastes or materials.

##### *c. Bacteria*

The sediment must not contain bacteria concentrations that affect the beneficial uses of the waters of the United States and/or State.

##### *d. Grain Size*

The sediment must contain no more than 10% of fine grained sediment. Fine grained sediment is defined as particles that are between 0.250 mm and 0.125 mm. A maximum of 25,000 cubic yards per year of fine-grained sediment (11% - 25%) between September and February can be placed on the beach.

#### 2. Discharge/Compliance with Water Quality Control Plan

Discharges must comply with the California Ocean Plan and the Regional Board's Water Quality Control Plan (Basin Plan).

#### 3. Protection of biological resources

##### *a. California grunion (*Leuresthes tenuis*)*

The project proposes to place sediment on the beach from March 1 to August 31; therefore the City of Solana Beach must determine beach habitat suitability for grunion spawning. The applicant must comply with the Special Condition No. 6 of the Regional General Permit 67 – Beach Nourishment in Southern California (Corps File No. 200401896-JLB).



*b. California least tern (Sterna antillarum)*

No activities authorized under this certification will be conducted within 1,000 yards of a California least tern breeding colony from April 1 through September 30.

*c. Western Snowy Plover (Caradrius alexandrinus nivosus)*

No activities authorized under this certification will be conducted within 1,000 yards of a Western Snowy Plover breeding colony from May 1 through September 30.

*d. Eelgrass (Zostera marina)*

The proposed project should avoid vegetated eelgrass area or potential eelgrass areas to the maximum extent feasible.

*e. Pismo Clam (Tivela stultorum)*

The City of Solana Beach must contact the California Department of Fish and Game (CDFG) Marine Region, prior to the survey to request current information on local populations and the appropriate methods in the project area.

*f. Areas of Special Biological Significance (ASBS)*

Turbidity plumes from sediment deposition outside an ASBS must not significantly alter natural water quality or harm marine aquatic life in an ASBS.

#### 4. Transport and Discharge Plan

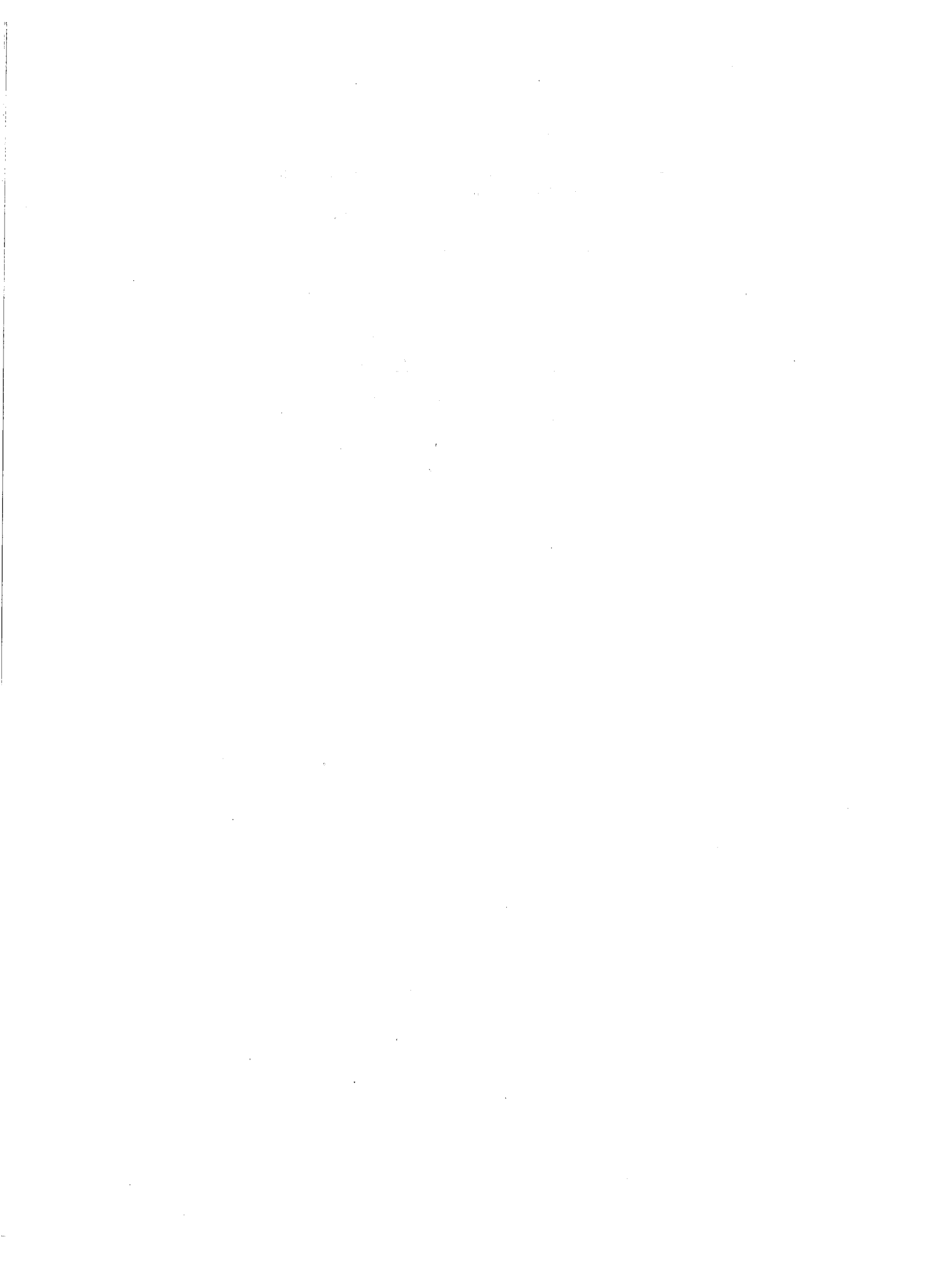
The applicant's Transport and Discharge Plan must include the "Hauling Operations" and "Hazardous Materials Management" measures below in order to qualify for this certification:

*a. Hauling Operations*

- i. All trucks hauling sand or other loose materials must be covered or required to maintain at least two feet of freeboard.
- ii. All equipment engines must be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- iii. All operations must be conducted in compliance with County Air Quality Management District requirements.

*b. Hazardous Materials Management*

- i. The Transport and Discharge Operations Plan must include a "Spill Prevention, Containment and Countermeasures Plan" that specifies fueling and equipment maintenance procedures to prevent spills and leaks, and containment and cleanup measures to be followed in the event of a spill.
- ii. All equipment must be inspected for leaks immediately prior to the start of beach operations, and regularly inspected thereafter until project completion. Vehicles with leaks must not enter the beach area.



- iii. Equipment must be cleaned and repaired (other than emergency repairs) at least 500 feet from the high tide line. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of at a lawfully authorized designation.

#### 5. Monitoring

Qualitative (visual) turbidity monitoring by an onshore observer from a high vantage point must be conducted during each day of construction and must not be greater than ambient beyond one-half mile offshore at or downcoast of the placement site. If visual monitoring indicates turbidity greater than ambient one-half mile from the discharge site (either offshore or downcoast) at any time for two (2) consecutive days, then:

- a. The monitor must immediately advise the Regional Board, U.S. Army Corps of Engineers, and CDFG.
- b. The City of Solana Beach must comply with any measures identified by the Regional Board, in consultation with other responsible agencies as appropriate, to mitigate project-related turbidity, including modifying or halting discharge.
- c. If turbidity persists on the third day, the monitor must commence daily water clarity testing and reporting to the Regional Board, Army Corps of Engineers, and CDFG. Testing must consist of measuring transmission of light through the water using a turbidity meter. Daily testing must continue until no project-related turbidity is detectable (i.e., until offshore and downcoast readings return to ambient). Testing must be designed to document the areal extent and concentration of the turbidity plume at the time of day it is most developed, and must include at least: samples taken as close as practicable to the discharge site, one-half mile upcoast of the discharge site, one-half mile offshore from the discharge site, and one-half mile downcoast of the discharge site (minimum four samples). Sampling must be done at mid-depth in the water column. These sampling protocols may be modified with the Regional Board's written approval. The City of Solana Beach must document logistical arrangements for such potential water quality sampling and must include draft quality assurance/quality control protocols.
- d. If turbidity is greater than ambient one-half mile from the discharge site (either offshore or downcoast) for five (5) consecutive days, the discharge must be halted or modified to reduce turbidity.

#### **D. MITIGATION:**

The project is self-mitigating as the project will restore sand-based marine habitats, and recreational opportunities. If the placement of sand negatively affects the water quality for the beneficial uses listed in the Regional Board's





Water Quality Control Plan, San Diego – Region 9, those negative effects must be mitigated. The Regional Board will stipulate the type of compensatory mitigation that will be required in an enforcement action against the City of Solana Beach.

**E. STREAM PHOTO DOCUMENTATION PROCEDURE:**

1. The City of Solana Beach, 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, and mitigation areas, 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 5. In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced. The City of Solana Beach must submit this information in a photo documentation report to the Regional Board with the Monitoring reports. The report must include a compact disc that contains digital files of all the photos (jpeg file type or similar). For this project, adequate photo documentation can be substituted for the photo documentation required for the State Water Resources Control Board Standard Operating Procedure 4.2.1.4: Stream Photo Documentation Procedure.

**F. GEOGRAPHIC INFORMATION SYSTEM REPORTING:**

1. The City of Solana Beach must submit Geographic Information System (GIS) shape files of the impact within 30 days of project impacts. 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.

**H. 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. The City of Solana Beach must submit a report to the Regional Board within 30 days of completion of the project. The report should include as-built drawings



no bigger than 11" x 17" and photos of the completed project including post-construction BMPs.

4. 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.
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 Regional Board Executive Officer.
6. 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."*

7. The City of Solana Beach 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; Project No. 08C-023  
9174 Sky Park Court, Suite 100  
San Diego, California 92123

6. Required Reports: The following list summarizes the reports, excluding 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 discharge	A.4	Within 24 hours of the unauthorized discharge
Change of Ownership & Responsibility Notification	A.6	Within 10 days of the sale of property
Annual Progress Reports	A.10	Prior to December 1 of each year until the project is complete
Notification	B.3	At least 5 days prior to commencement of construction
Notification	B.7	Within 30 days of completion of the project
Final Report	B.7	After post-construction monitoring is completed.
Sampling and Analysis Plan	C.	Acceptance needed before each placement
Stream Photo Documentation	E.1	With Monitoring reports
GIS	F.1	Within 30 days of project impacts

**PUBLIC NOTIFICATION OF PROJECT APPLICATION:**

On April 22, 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:**

Lilian Busse  
California Regional Water Quality Control Board, San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123  
858-467-2971  
lbusse@waterboards.ca.gov>



**WATER QUALITY CERTIFICATION:**

I hereby certify that the proposed discharge from the City of Solana Beach Opportunistic Beach Restoration Program (Project No. 08C-023) 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 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 Board's Water Quality Control Plan (Basin Plan).



JOHN H. ROBERTUS  
Executive Officer  
Regional Water Quality Control Board

3/4/2009  
Date

- Attachments:
1. Project Information
  2. Distribution List
  3. Location Map
  4. Site Map
  5. Stream Photodocumentation Procedure





**ATTACHMENT 1  
PROJECT INFORMATION**

Applicant: ✓ City of Solana Beach  
✓ Leslea Meyerhoff  
635 South Highway 101  
Solana Beach, CA 92075  
Telephone: (858) 720-2446  
Fax: (760) 804-9744  
Email: [Lmeyerhoff@cosb.org](mailto:Lmeyerhoff@cosb.org)

Applicant Representatives: ✓ Moffatt & Nichol  
Brian Leslie  
1660 Hotel Circle North, Suite 200  
San Diego, CA 92108  
Telephone: (619) 200-6050  
Fax: (619) 200-6055  
Email: [bleslie@moffattnichol.com](mailto:bleslie@moffattnichol.com)

Project Name: ✓ City of Solana Beach Opportunistic Beach Restoration Program

Project Location: ✓ The proposed project is located within the City of Solana Beach at Fletcher Cove Beach.

Type of Project: ✓ Placement of opportunistically derived sediment for beach restoration.

Project Description: ✓ The project proposes to place a maximum of 150,000 cubic yards per year (for five years) of beach-quality sand from upland or dredging projects on Fletcher Cove Park in the City of Solana Beach. The material will include up to 25,000 cubic yards per year of fine-grained sediment (11% - 25%) between September and February. The material placed on the beach will provide erosion control, recreational benefits, and habitat enhancement.

Federal Agency/Permit: U.S. Army Corps of Engineers §404 and §10

Other Required Regulatory Approvals: ✓ California Coastal Commission, Coastal Development Permit  
California State Lands Commission, Lease of State Lands

California Environmental Quality Act (CEQA) Compliance: ✓ Mitigated Negative Declaration, Opportunistic Beach Fill Program in the Cities of Encinitas, Solana Beach, Coronado, and Imperial Beach  
State Clearing House Number #2008021047  
Lead Agency: SANDAG  
Approval: June 11, 2008 (per resolution # 2008-099 by the City Council of the City of Solana Beach)

Receiving Water: Pacific Ocean



Impacted Waters of the United States:  The proposed project will temporarily impact 5.0 acres to waters of the U.S.

Dredge Volume: None

Related Projects Implemented/to be Implemented by the Applicant(s): None

Compensatory Mitigation: The project is self-mitigating as the project will restore sand-based marine habitats, and recreational opportunities, therefore compensatory mitigation is not proposed.

Best Management Practices (BMPs): During construction, the following BMPs for the project must include, but not be limited to:

- a. All trucks hauling sand or other loose materials shall be covered or required to maintain at least two feet of freeboard.
- b. All equipment engines shall be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- c. All operations shall be conducted in compliance with County Air Quality Management District requirements.
- d. The Transport and Discharge Operations Plan shall include a "Spill Prevention, Containment and Countermeasures Plan" that specifies fueling and equipment maintenance procedures to prevent spills and leaks, and containment and cleanup measures to be followed in the event of a spill.
- e. All equipment shall be inspected for leaks immediately prior to the start of beach operations, and regularly inspected thereafter until project completion. Vehicles with leaks shall not enter the beach area.
- f. Equipment shall be cleaned and repaired (other than emergency repairs) at least 500 feet from the high tide line. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of at a lawfully authorized designation.

Public Notice: On April 22, 2008, receipt of the project application was posted on the Regional Board web site to serve as appropriate notification to the public.

Fees: Total Due: \$ 500  
Total Paid: \$500 (Check No. 91207)



CIWQS:

Regulatory Measure ID: 344241  
Place ID: 716431  
Party ID: 41411  
WDID 9 000001771



**ATTACHMENT 2  
DISTRIBUTION LIST**

Brian Leslie  
Moffatt & Nichol  
1660 Hotel Circle, Suite 200  
San Diego, CA 92108

U.S. Army Corps of Engineers  
Regulatory Branch  
16885 W. Bernardo Dr., Suite 300 A  
San Diego, CA 92127  
(858) 674-5388 (fax)

U.S. Army Corps of Engineers  
Regulatory Branch  
P.O. Box 532711  
Los Angeles, CA 90053-2325  
(213) 452-4196 (fax)

✓ State Water Resources Control Board  
Division of Water Quality





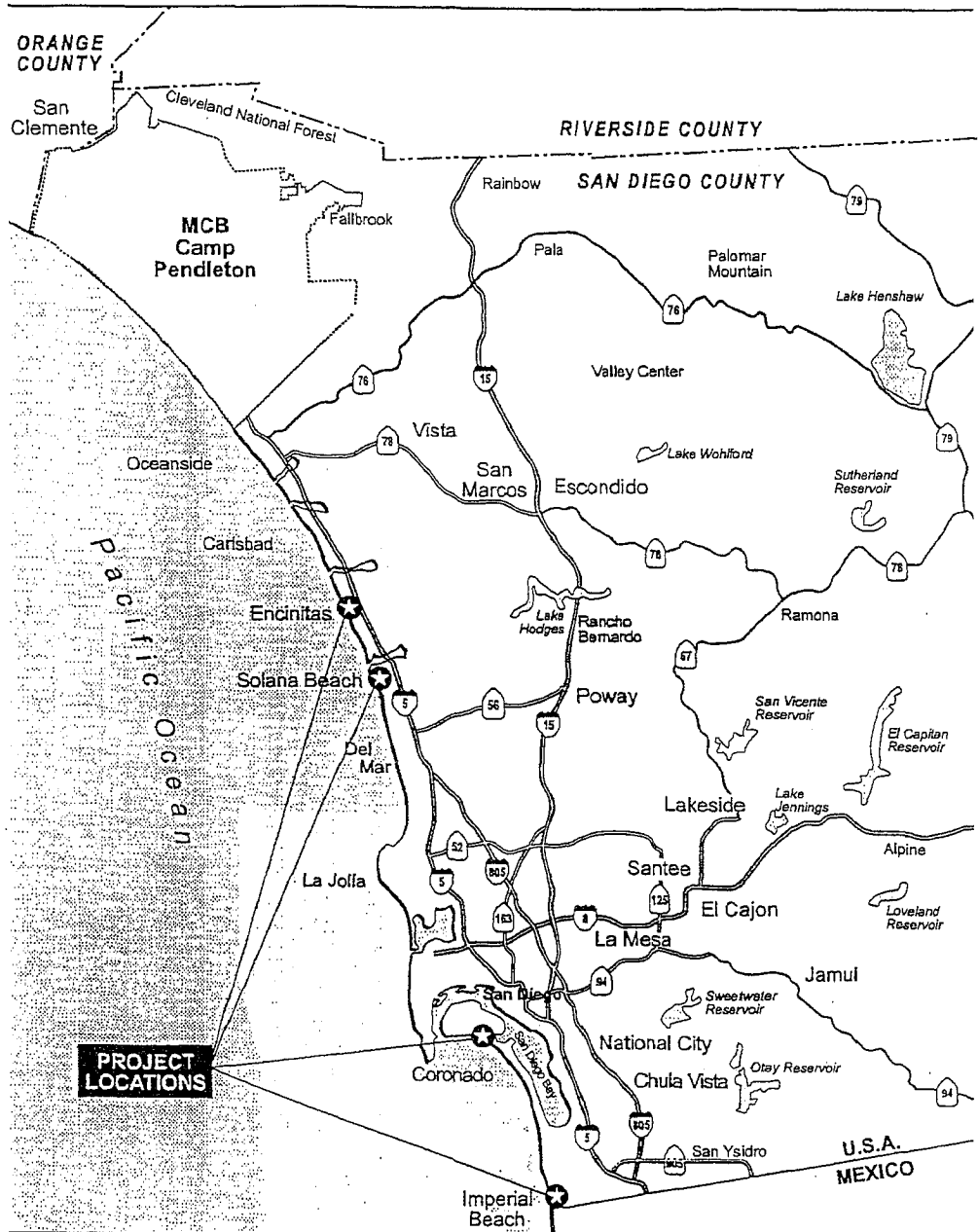
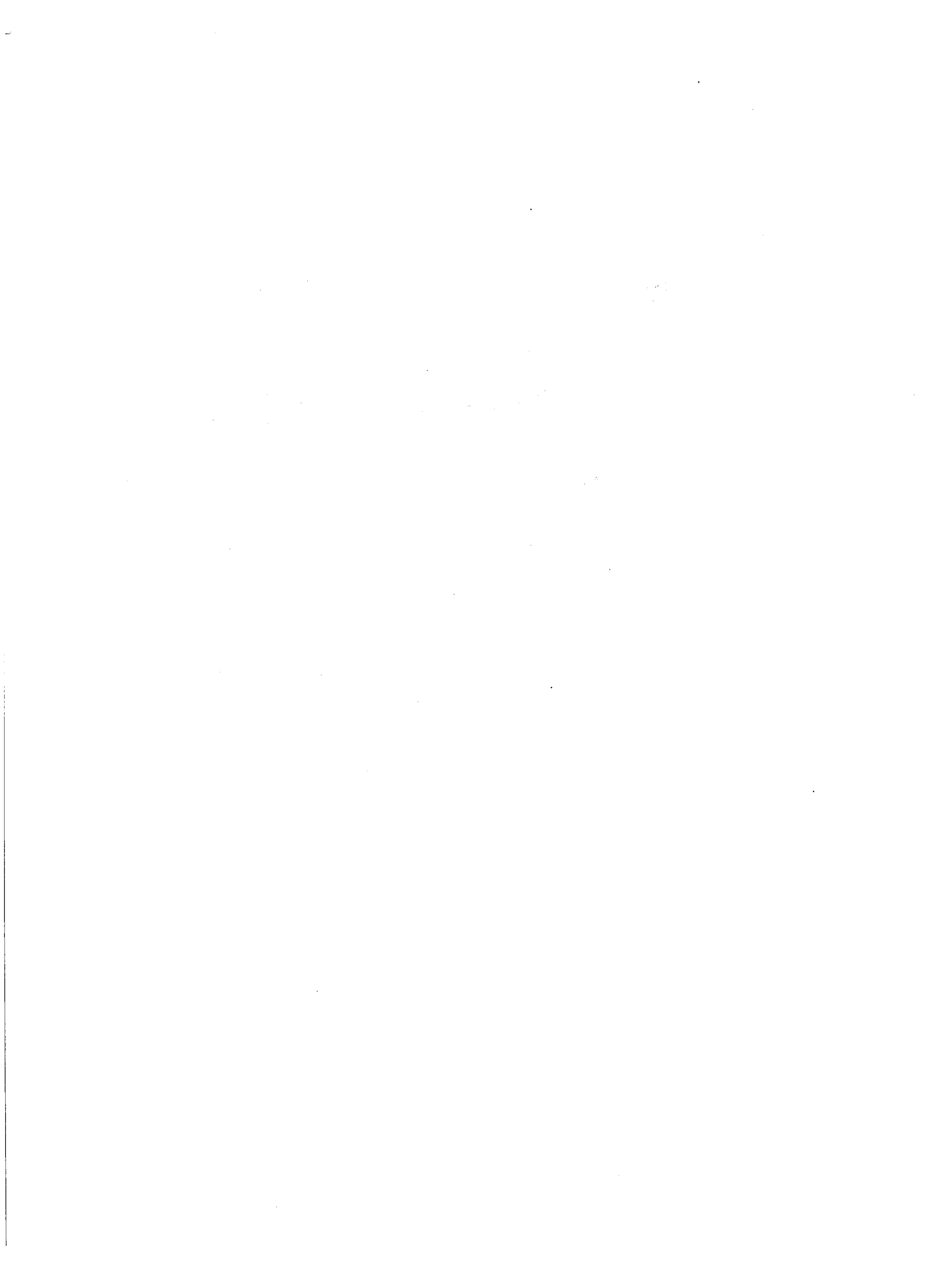
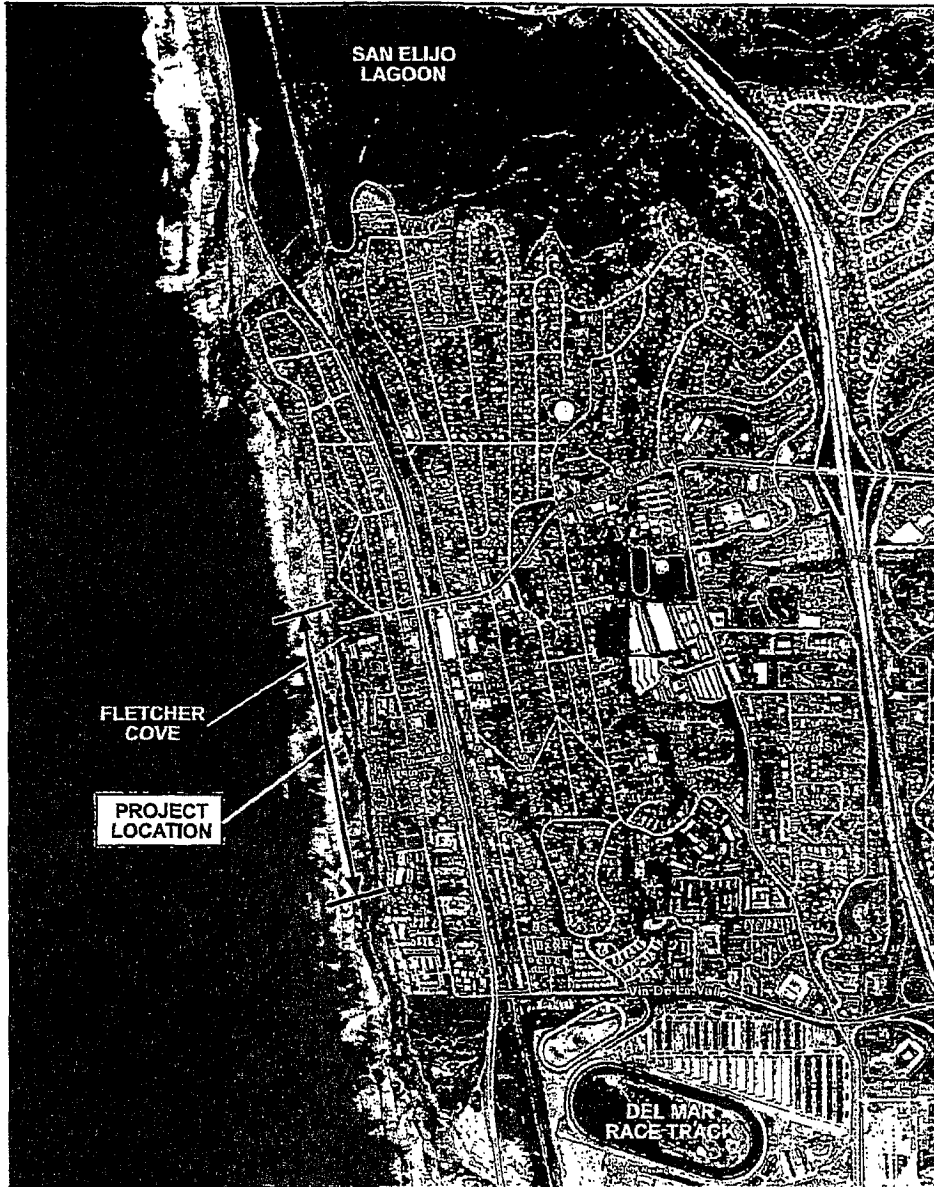


Figure 1  
Regional Location Map

Opportunistic Beach Fill Program at Four Beaches Draft MND  
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Source: Google Earth 2006



No Scale

**Figure 3**  
**Project Location**  
**City of Solana Beach**

Opportunistic Beach Fill Program at Four Beaches Draft MND  
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4/17/2008

3/4/2009



**ATTACHMENT 5  
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.

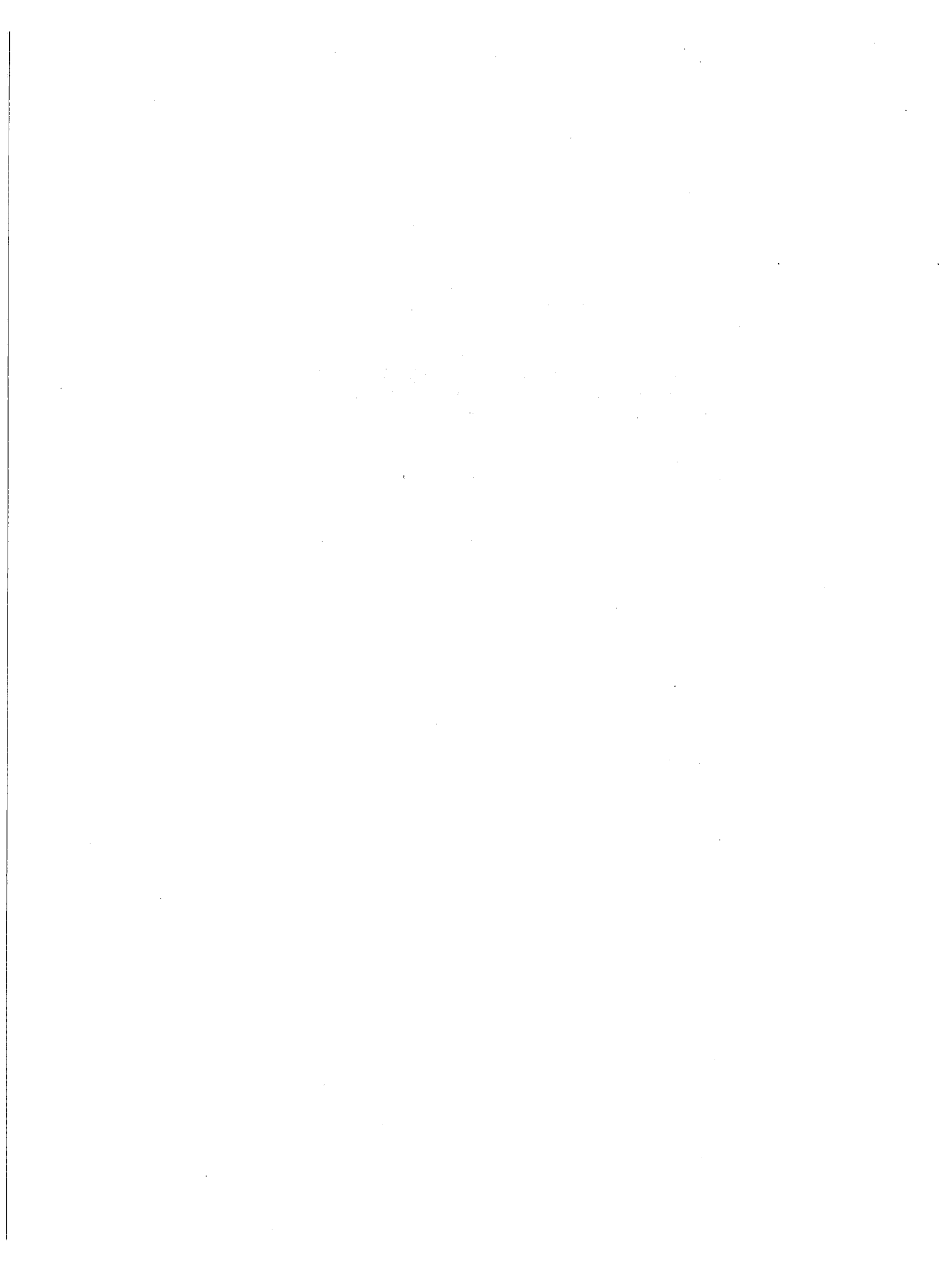
If possible, try to include a black board or yellow photo sign in the view, marked at a minimum with the location, subject, time and date of the photograph. A blank photo sign form is included in this document.

### **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.





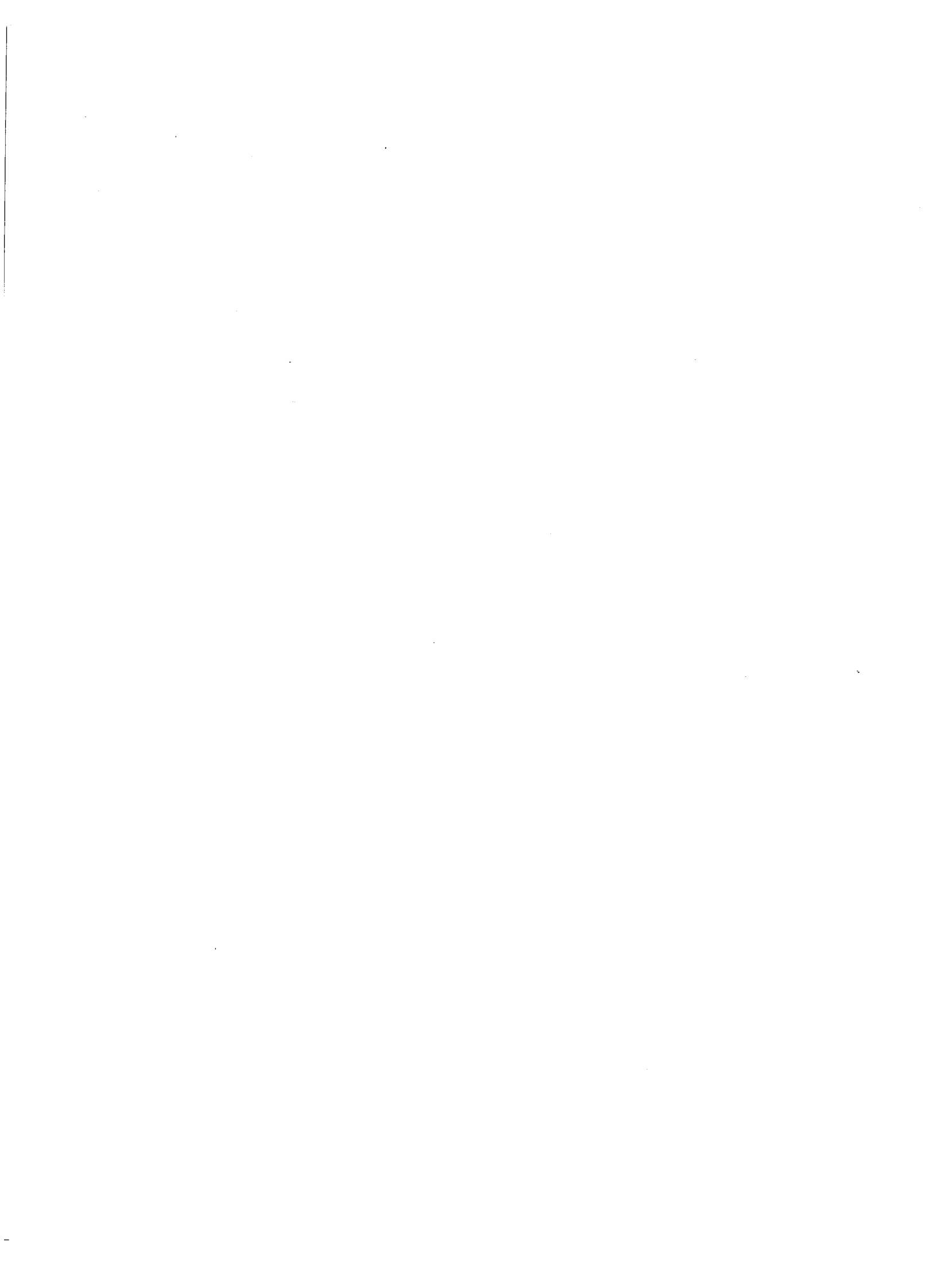


PHOTO SIGN FORM: Print this form on yellow paper. Complete the following information for each photograph. Include in the photographic view so that it will be legible in the finished photo.

Location:

Subject Description:

Date:

Time:

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