California Regional Water Quality Control Board

San Diego Region

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

Linda S. Adams
Acting Secretary for Environmental Protection

Edmund G. Brown, Jr.
Governor

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

February 7, 2011

In reply refer to:
734568:jebsen

San Ysidro School District
Attention: Tom Silva
4350 Otay Mesa Road
San Ysidro, CA 92173

Dear Mr. Silva:

SUBJECT: Action on Request for Clean Water Act Section 401 Water Quality Certification for Vista Del Mar Elementary School, 09C-017

Enclosed find Clean Water Act Section 401 Water Quality Certification (Certification) with acknowledgment of enrollment under State Water Resources Control Board Order No. 2003-017 DWQ for Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have received State Water Quality Certification for the Vista Del Mar Elementary School project. A description of the project can be found in the project information sheet and on location and site maps compiled by the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), which are included as Attachments 1 through 6.

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 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, referral to the State Attorney General for injunctive relief; and, referral to the District Attorney for criminal prosecution.

In the subject line of any response, please include the requested "**In reply refer to:**" information located in the heading of this letter. If you have any questions regarding this notification, please contact Ms. Jody Ebsen directly at 858-636-3146 or by email via jebsen@waterboards.ca.gov.

Respectfully,

DAVID W. GIBSON
Executive Officer

DWG:esb:jme

Enclosure:

Clean Water Act Section 401 Water Quality Certification No. 09C-017 Vista Del Mar Elementary School, with 6 attachments

cc: Refer to Attachment 2 of Certification for Distribution List.

Tech Staff Info & Use	
File No.	09C-017
WDID	9000001990
Reg. Measure ID	362029
Place ID	734568
Party ID	43210
Person ID	484997

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9174 Sky Park Court, Suite 100, San Diego, California 92123-4340
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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: **Vista Del Mar Elementary School, Certification Number 09C-017, WDID: 9 000001990**

APPLICANT: **Tom Silva**
San Ysidro School District
4350 Otay Mesa Road
San Ysidro, CA 92173

CIWQS:	
Reg. Measure	362029
Place	734568
Party	43210

ACTION:

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

PROJECT DESCRIPTION:

The San Ysidro School District proposes to build an elementary school, the related infrastructure and extend the eastern section of Del Sol Boulevard to the western edge of project boundary. Currently Del Sol Boulevard terminates on the east side of the project site and extension of the road is necessary to provide access to the school. The site is located on the southwest corner of Surf Crest Drive and Del Sol Boulevard in the City of San Diego and within the San Ysidro hydrologic sub-area (911.11). Storm water flows exiting the project site will discharge to unnamed tributaries of the Tijuana River located north of Del Sol Boulevard and south of the elementary school site. The proposed project will impact 0.02 acres (891 square feet) of vernal pools.

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, San Ysidro School District must satisfy the following:

A. GENERAL CONDITIONS:

1. Water Quality Certification No. 09C-017 (Certification) is only valid if the project begins no later than 5 (five) years from the date of issuance. If the project has not begun within 5 years from the date of issuance, then this Certification expires.

2. San Ysidro School District 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 (San Diego Water Board), to support this 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 San Diego Water Board and reevaluation for individual Waste Discharge Requirements and/or Certification amendment.

3. During construction, San Ysidro School District 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. San Ysidro School District must permit the San Diego Water Board or its authorized representative at all times, upon presentation of credentials:

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

5. San Ysidro School District must notify the San Diego Water Board within **24 hours** of any unauthorized discharge, including hazardous or toxic materials, to waters of the U.S. and/or State; measures that were implemented to stop and contain the discharge; measures implemented to clean-up the discharge; the volume and type of materials discharged and recovered; and additional best management practices (BMPs) or other measures that will be implemented to prevent future discharges.

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

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

    b. Transfer of Mitigation Responsibility: Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification and as described in *Vista Del Mar Elementary School*

Vernal Pool Reserve Restoration Plan, February 2, 2011, Helix Environmental Planning, Inc., must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board within **10 days** of the transfer date.

c. Transfer of Post-Construction BMP Maintenance Responsibility: San Ysidro School District assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred San Ysidro School District must submit to the San Diego Water Board within **10 days** of the transfer date a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer specifications.

Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Certification and references in this Certification to San Ysidro School District will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not automatically relieve San Ysidro School District of this Certification in the event that a transferee fails to comply.

8. 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.

9. In response to a suspected violation of any condition of this Certification, the San Diego Water Board may require the holder of any permit or license subject to this Certification to furnish, under penalty of perjury, any technical or monitoring reports the San Diego Water Board deems appropriate, provided that the burden, including costs, of the reports must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

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

11. San Ysidro School District and successor owners must submit annual progress reports describing status of compliance with all requirements of this Certification to the San Diego Water Board prior to **August 1** of each year following the issuance of this Certification until the project has reached completion.

B. PROJECT CONDITIONS:

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

2. San Ysidro School District 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 Requirements are accessible at: *http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf.*

3. San Ysidro School District must notify the San Diego Water Board in writing at least **5 days** prior to the actual commencement of dredge, fill, and discharge activities.

4. San Ysidro School District must comply with the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ (for construction started on or after July 1, 2010), the NPDES General Permit for Storm Water Discharges Associated with Construction Activity.

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

6. At all times San Ysidro School District is prohibited from allowing discharges of concentrated flow during and after construction or discharges resulting from project completion that cause offsite downstream erosion or damage to properties or stream habitat.

7. Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the U.S. and/or the State or placed in locations that may be subjected to storm flows.

8. During construction all rough graded desilting basins must be designed, constructed and maintained, until all development on the project site is completed, according to the most recent California Stormwater Quality Association guidance for sediment basins.

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

10. All areas that will be left in a rough graded state must be stabilized no later than one week after completion of grading. San Ysidro School District and subsequent owners, are responsible for implementing and maintaining BMPs to prevent erosion of the rough graded areas to prevent flow from this area from causing negative impacts to beneficial uses. After completion of grading, all areas must be revegetated with native species appropriate for the area. The revegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory, which can be found online at http://www.cal-ipc.org/ip/inventory/weedlist.php.

11. Substances hazardous to aquatic life including, but not limited to, petroleum products, raw cement/concrete, asphalt, and coating materials, are prohibited from being discharged and must be prevented from contaminating the soil and/or entering waters of the U.S. and/or State, except as authorized by the Certification. BMPs must be implemented to prevent such discharges during each project activity involving hazardous materials.

12. To protect rare, threatened, or endangered species the San Ysidro School District must implement all Conservation Measures included in the U.S. Fish and Wildlife Service Section 7 Consultation. The San Ysidro School District must provide a copy of the final Section 7 Consultation letter to the San Diego Water Board **prior to initiation of construction activities.**

C. Post Construction Storm Water Management

1. San Ysidro School District is prohibited from allowing post-construction discharges to cause onsite or offsite downstream erosion, damage to properties or damage to stream habitats in the unnamed tributaries north and south of the future school and Del Sol Boulevard that will receive post-construction discharges from project site.

2. All post-construction best management practices (BMPs) must attenuate all storm water flows exiting the site to at or below pre-development conditions for storm events.

3. All storm drain inlet structures within the project boundaries must be stamped and/or stenciled (or equivalent) with appropriate language prohibiting non-storm water discharges.

4. Prior to project construction, San Ysidro School District must submit to the San Diego Water Board a letter accepting full responsibility for the inspection and maintenance of all BMPs installed on all roads that are required to be improved as part of the project, including, but not limited to, Del Sol Boulevard Street Improvement. Alternatively, San Ysidro School District may submit a letter documenting that the City of San Diego accepts full responsibility for the inspection and maintenance of all BMPs installed on all roads that are required to be improved as part of the project, including, but not limited to, Del Sol Boulevard Street Improvement.

5. All post-construction BMPs must be installed and functional prior to occupancy and/or planned use of development areas.

6. All post-construction BMPs as described in the application and supplemental documents including those outlined in: *CEQA Drainage Report Vista Del Mar, San Ysidro School District,* February 2009; RBF Consulting; *Water Quality Technical Report (WQTR) Del Sol Boulevard Street Improvements Phase 1, San Ysidro School District,* April 14, 2008, October 21, 2008, May 12, 2009 RBF Consulting; *Water Quality Technical Report (WQTR) Vista Del Mar, San Ysidro School District,* February 10, 2009 RBF Consulting; must be sized to comply with the following numeric sizing criteria and treat 100 percent of the new impervious surfaces associated with the project:

   a. Volume

   Volume-based BMPs must be designed to mitigate (infiltrate, filter, or treat) either:

      i. The volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the local historical rainfall record (0.6 inch approximate average for the San Diego County area); or
      ii. The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event; or

   b. Flow

   Flow-based BMPs must be designed to mitigate (infiltrate, filter, or treat) either:

      i. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or

ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or
iii. The maximum flow rate of runoff, as determined from the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

7. All post-construction structural BMPs, including, but not limited to, Clearwater Solutions filtration units (or equivalent that will remove hydrocarbons, soluble metals such as copper, lead, & zinc, phosphorus, pathogens such as e-coli, and sediment) as described in *CEQA Drainage Report Vista Del Mar, San Ysidro School District,* February 2009; RBF Consulting; *Water Quality Technical Report (WQTR) Del Sol Boulevard Street Improvements Phase 1, San Ysidro School District,* April 14, 2008, October 21, 2008, May 12, 2009 RBF Consulting; *Water Quality Technical Report (WQTR) Vista Del Mar, San Ysidro School District,* February 10, 2009 RBF Consulting; and storm water discharge points must:

   a. be regularly inspected and maintained for the life of the school and road per manufacturers' specifications,
   b. be assessed for performance of the systems to protect receiving waters and identify any necessary corrective measures,
   c. have preventive and corrective maintenance performed,
   d. be inspected prior to the commencement of the rainy season (October 1) and after every storm event exceeding 0.5 inches of precipitation,
   e. maintain a log documenting all inspection and maintenance activities.

8. **Before occupancy**, San Ysidro School District, their designated party or the successor owners of the Vista Del Mar Elementary School, must submit a letter to the San Diego Water Board and the City of San Diego describing where the post-construction inspection and maintenance log will be kept. This log must be made available to the resource agencies upon request. Failure to maintain a post-construction inspection and maintenance log will be a violation of this Certification.

9. The extended detention basin must be designed and constructed in accordance with the most recent California Stormwater Quality Association guidance for extended detention basins. The basin outlets must be placed to maximize the flowpath through the facility. The ratio of flowpath length to width from the inlet to the outlet must be at least 1.5:1. The flowpath length is defined as the mean width of the basin.

10. San Ysidro School District must maintain the extended detention basin in perpetuity according to the most recent California Stormwater Quality Association guidance for extended detention basins. Typical activities include, but are not limited to:

a. Semiannual inspection for the beginning and end of the wet season for standing water, slope stability, sediment accumulation, trash and debris, and presence of burrows;
b. Removal of accumulated trash and debris in the basin as needed to ensure proper functioning of the basin; and
c. Yearly inspection of accumulated sediment volume. Accumulated sediment should be removed and the basin re-graded when the accumulated sediment volume exceeds 10 percent of the basin volume.

D. RECEIVING WATER MONITORING

1. San Ysidro School District must develop and implement a five-year Receiving Waters Monitoring Plan in the Tijuana watershed to evaluate potential project impacts from pollutants/stressors to the unnamed tributaries to the Tijuana River that are north and south of the school and road where discharges from the project enter receiving waters. The Receiving Waters Monitoring Plan must be developed and submitted to the San Diego Water Board for approval **prior to construction commencement.** The Receiving Waters Monitoring Plan must assess conditions before, during, and after impacts have occurred by measuring changes in a functional assessment of the health of wetland and riparian habitats in the unnamed tributaries to the Tijuana River. The five year receiving water monitoring will begin prior to the start of project construction, and the data and analysis must be submitted annually by December 1 of each year.

2. San Ysidro School District must annually conduct a quantitative function-based assessment of the health of wetland and riparian habitats in the unnamed tributaries to the Tijuana River that are north and south of the project site using the **California Rapid Assessment Method** (CRAM)[1] along each stream reach beginning immediately down stream of storm water discharges. The results of the CRAM assessment of the receiving waters must be submitted annually by December 1 of each year. The discussion in the annual report must include comparisons to previous CRAM assessments and identify any changes or trends in the data.

3. San Ysidro School District must notify the San Diego Water Board if any degradation is discovered in the receiving waters within 5 days of discovery.

4. In response to a discovery of degradation in the receiving waters San Ysidro School District must submit to the San Diego Water Board a restoration plan and recommendations to prevent further degradation within 30 days of degradation discovery.

[1] Information on CRAM is available at the California Rapid Assessment Method homepage at http://www.cramwetlands.org/

5. The San Diego Water Board Executive Officer may make revisions to the Receiving Water monitoring program at any time during the five year monitoring term, and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

E. COMPENSATORY MITIGATION FOR LOSS OF WATERS OF THE U.S./STATE

1. Mitigation for permanent discharges to 0.02 acres (891 square feet) of vernal pool waters of the United States, must be achieved at a 5:1 ratio, with at least 0.02 acres of vernal pool restoration (re-establishment) and 0.08 acres of vernal pool restoration and/or enhancement at the West Otay Mesa Parcel B Preserve and as described in *Vista Del Mar Elementary School, Vernal Pool Preserve Restoration Plan,* February 2, 2011, Helix Environmental Planning, Inc.

2. San Ysidro School District must salvage soil collected from the impacted vernal pools to be used as inoculum at the restoration site.

3. CRAM assessments to be included as part of the vernal pool mitigation monitoring must be done near the end of the rainy season when ponding is evident and most vernal pool species are visible.

4. San Ysidro School District must provide mitigation monitoring for a minimum of 5 years. The monitoring period must include at least 3 winters producing average or above average rain totals for the year. Rain totals and averages for the year will be determined from the closest National Weather Service rain gauge. An on-site rain gage must be placed on the mitigation site. A log of rain measurements from the site must be included in the monitoring report.

5. San Ysidro School District must include in the monitoring report the depth, extent, and duration of ponding in the mitigation and reference vernal pools, identify if the conditions present are adequate to support San Diego fairy shrimp and vernal pool species populations. In years when conditions are adequate include a comparison of population densities of San Diego fairy shrimp in the mitigation pools and the reference pools.

6. If populations of San Diego fairy shrimp or other vernal pool species decline, an evaluation should be done to identify all potential causes for the decline and propose recommendations for any necessary actions.

7. San Ysidro School District must notify the San Diego Water Board in writing at least **5 days** prior to the actual commencement of mitigation installation, and completion of mitigation installation.

8. Prior to the start of construction, San Ysidro School District must provide the San Diego Water Board a preservation mechanism (e.g. deed restriction,

conservation easement, etc.) 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.

9. San Ysidro School District must submit a report (including topography maps and planting locations) to the San Diego Water Board within **90 days** of completion of mitigation site preparation and planting, describing as-built status of the mitigation project. Maps included as part of the report must indicate which mitigation pools received inoculum from the impact site.

10. The construction of proposed mitigation must be concurrent with project grading and completed no later than 9 months following the initial discharge of dredge or fill material into on-site waters. Delays in implementing mitigation must be compensated for by an increased mitigation implementation of 10 percent of the cumulative compensatory mitigation for each month of delay.

11. San Diego Water Board acceptance of the final mitigation plan applies only to the site and plan that mitigates for the Vista Del Mar Elementary School 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 West Otay Mesa Parcel B Preserve for mitigation.

12. 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.

13. San Ysidro School District is responsible to mitigate and repair any damage to the mitigation site caused by vandalism.

14. 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, San Ysidro School District is responsible for repair and replanting of the damaged area(s).

15. Mitigation monitoring reports must be submitted annually until mitigation has been deemed successful. 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; and
    j. Other items specified in the final *Vista Del Mar Elementary School Vernal Pool Preserve Restoration Plan,* February 2, 2011, Helix Environmental Planning, Inc.

16. In the event that the proposed mitigation does not obtain the 5th year success criteria, San Ysidro School District must provide the San Diego Water Board with a technical report detailing the actions that will be taken to bring the mitigation up to the success criteria.

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

Preservation is defined as the acquisition and legal protection from future impacts in perpetuity of existing vegetated or unvegetated waters of the U.S./State (e.g., conservation easement).

F. Photo Documentation Procedure

1. San Ysidro School District, and its successors, must conduct photo documentation prior to and after construction of the permanent and temporary impacts to the project site, mitigation areas and receiving water areas beginning from the point of storm water discharges, and of implemented post-construction BMPs.

2. All photo documentation must be conducted in accordance with the State Water Resources Control Board Standard Operating Procedure: Stream Photo Documentation Procedure, included as Attachment Number 6. In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced.

3. San Ysidro School District must submit this information in a photo documentation report to the San Diego Water Board with the annual mitigation monitoring reports. The report must include a compact disc that contains digital files of all the photos (jpeg file type or similar).

G. Geographic Information System Reporting

1. San Ysidro School District must submit Geographic Information System (GIS) shape files of the impact and mitigation areas within first Mitigation and Monitoring Report 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.

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 San Diego Water Board for failure to furnish requested information pursuant to CWC section 13268.

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

3. San Ysidro School District must submit a final project report to the San Diego Water Board within 90 days of completion of the project. The report should

include as-built drawings no bigger than 11" x 17", location of post-construction BMPs and photos of the completed project.

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

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

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

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

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

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

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

    California Regional Water Quality Control Board
    San Diego Region
    Attn: 401 Certification; Project No. 09C-017
    9174 Sky Park Court, Suite 100
    San Diego, California 92123

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

Report Topic	Certification Condition	Due Date(s)
Unauthorized Discharges	A.4.	Within 24 hours
Transfer of Ownership/Responsibility	A.7	Within 10 days
Annual Progress Report	A11	August 1 of each year until project complete
Impacts to Waters	B.3	5 days prior to commencement of fill activities
Final Section 7 Consultation letter	B.11	Prior to commencement of construction
Letter of Responsibility	C.4	Prior to commencement of construction
Notification of BMP log location	C.9	Prior to occupancy
Receiving Water Monitoring Plan	D.1	Prior to construction
Annual Receiving Water Monitoring	D.2	Annually by December 1 of each year
Notification	D.3	Within 5 days of discovery of degradation to receiving waters, as necessary
Restoration Plan	D.4	Within 30 days of discovery of degradation to receiving waters, as necessary
Commencement of Mitigation Installation	E.7	5 days prior to commencement of activities
Preservation Mechanism	E.8	Prior to commencement of construction
Mitigation Site Completion Report	E.9	Within 90 days of mitigation installation
Mitigation Monitoring	E.15	Annually by December 1 of each year
Photo Documentation	F.3	Annually by December 1 of each year, as necessary
GIS	G.1	With first annual report
Project Completion Report	H.3	Within 90 days of project completion

CEQA FINDINGS:

1. The San Ysidro School District is the lead agency under the California Environmental Quality Act (Public Resources Code section 21000, et seq., (CEQA)) and filed a Notice of Determination on July 30, 2009, for a Final Subsequent Environmental Impact Report *(Vista Del Mar Elementary School Subsequent Environmental Impact Report SCH No. 2004111054*, The Planning Center, July 2009), under CEQA Guidelines Title 14, California Code of Regulations, (14 CCR § section15094). The San Ysidro School District has determined the project will have a significant effect on the environment, and mitigation and monitoring measures were made a condition of the project.

2. The San Diego Water Board has reviewed the lead agency's Final Subsequent Environmental Impact Report and finds that the project as proposed is consistent with the Final Subsequent Environmental Impact Report and therefore determines that issuance of this Certification is consistent with the Final Subsequent Environmental Impact Report.

PUBLIC NOTIFICATION OF PROJECT APPLICATION:

On March 3, 2009 receipt of the project application was posted on the San Diego Water Board web site to serve as appropriate notification to the public.

REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON:

Jody Ebsen
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123
858-636-3146
jebsen@waterboards

WATER QUALITY CERTIFICATION:

I hereby certify that the proposed discharge from Vista Del Mar Elementary School (Certification No.09C-017) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)," which requires compliance with all conditions of this Water Quality Certification. Please note that enrollment under Order No. 2003-017 DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicants' project description and/or on the attached Project Information Sheet, and (b) on compliance with all applicable requirements of the Water Quality Control Plan for the San Diego Basin Region (9) (Basin Plan).

David W. R

2-7-2011

DAVID W. GIBSON
Executive Officer
Regional Water Quality Control Board

Date

Attachments:

1. Project Information
2. Distribution List
3. Location Map
4. BMP Maps, A and B
5. Mitigation Maps, A, B C, D
6. Stream Photodocumentation Procedure

ATTACHMENT 1
PROJECT INFORMATION

Applicant:	San Ysidro School District Attention: Tom Silva 4350 Otay Mesa Road San Ysidro, CA 92173 Telephone: 619-428-4476 Email: tsilva@sysd.k12.ca.us
Applicant Representatives:	Helix Environmental Attention: Steve Neudecker 7578 El Cajon Blvd., Ste. 200 La Mesa, CA 91941 Telephone: 619-462-1515 Facsimile: 619-462-0552 Email:steven@helixepi.com
Project Name:	Vista Del Mar Elementary School
Project Location:	Latitude: 32.57145 N Longitude: -117.027192 W
Type of Project:	Elementary school and road improvements.
Need for Project:	Provide an elementary school for the nearby residential neighborhood and to extend Del Sol Boulevard enough to safely access the school.
Project Description:	The San Ysidro School District proposes to build an elementary school, the related infrastructure and extend the eastern section of Del Sol Boulevard to the western edge of project boundary. Currently Del Sol Boulevard terminates on the east side of the project site and extension of the road is necessary to provide access to the school. The site is located on the southwest corner of Surf Crest Drive and Del Sol Boulevard in the City of San Diego and within the San Ysidro hydrologic sub-area (911.11). Storm water flows exiting the project site will discharge to unnamed tributaries of the Tijuana River located north of Del Sol Boulevard and south of the elementary school site. The proposed project will impact 0.02 acres (891 square feet) of vernal pools.
Federal Agency/Permit:	U.S. Army Corps of Engineers §404, Individual Permit, Lanika Cervantes.

California Environmental Quality Act (CEQA) Compliance:	*Vista Del Mar Elementary School Subsequent Environmental Impact Report SCH No. 2004111054*, The Planning Center, July 2009, San Ysidro School District.
Receiving Water:	San Ysidro hydrologic sub-area (911.11).
Affected Waters of the United States:	Permanent: 0.02 acres (891 square feet) of vernal pool waters of the United States.
Compensatory Mitigation:	0.02 acres of vernal pool restoration and 0.08 acres of vernal pool restoration and/or enhancement at the West Otay Mesa Parcel B Preserve and as described in *Vista Del Mar Elementary School, Vernal Pool Preserve Restoration Plan,* February 2, 2011, Helix Environmental Planning, Inc.
Best Management Practices (BMPs):	Extended detention basin and Clearwater Solutions filtration units (or equivalent that will remove hydrocarbons, soluble metals such as copper, lead, & zinc, phosphorus, pathogens such as e-coli, and sediment) as described in *CEQA Drainage Report Vista Del Mar, San Ysidro School District,* February 2009; RBF Consulting; *Water Quality Technical Report (WQTR) Del Sol Boulevard Street Improvements Phase 1, San Ysidro School District,* April 14, 2008, October 21, 2008, May 12, 2009 RBF Consulting; *Water Quality Technical Report (WQTR) Vista Del Mar, San Ysidro School District,* February 10, 2009 RBF Consulting.
Public Notice:	On March 3, 2009 receipt of the project application was posted on the San Diego Water Board web site to serve as appropriate notification to the public.
Fees:	Total Due $640.00 Total Paid: $640.00 (check No. 26210)
CIWQS:	Regulatory Measure ID: 362029 Place ID: 734568 Party ID: 43210

ATTACHMENT 2
Distribution List

Cc via email:

Lanika Cervantes
U.S. Army Corps of Engineers, Regulatory Branch
Lanika L.Cervantes@usace.army.mil

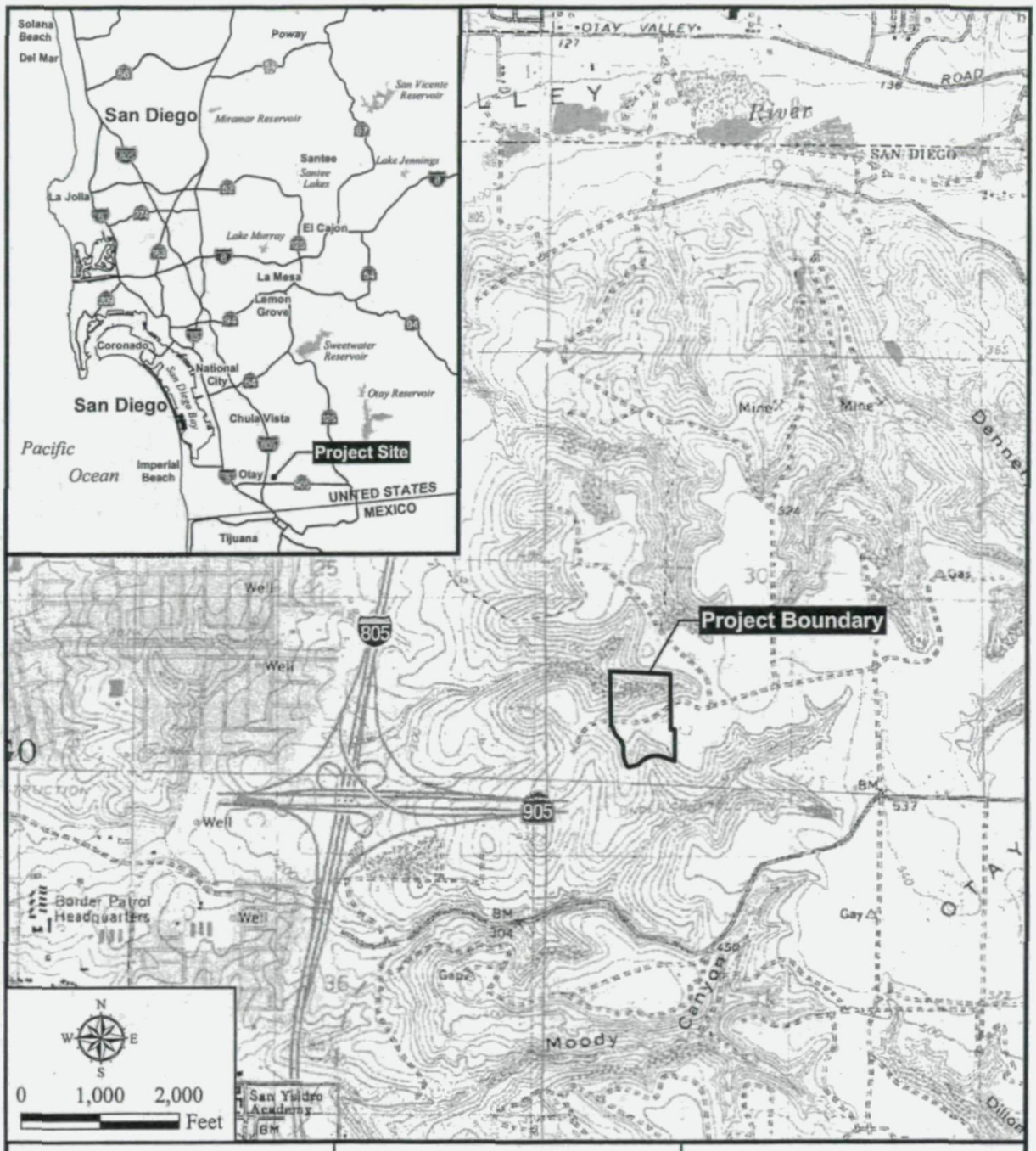
State Water Resources Control Board, Division of Water Quality
401 Water Quality Certification and Wetlands Unit
Stateboard401@waterboards.ca.gov

U.S. Environmental Protection Agency, Region 9
Wetlands Regulatory Office
R9-WTR8-Mailbox@epa.gov

David Zoutendyk
U.S. Department of the Interior
Fish and Wildlife Service
david_zoutendyk@fws.gov

Steve Neudecker
Helix Environmental Planning, Inc.
SteveN@helixepi.com

Attachment 3
Site Location



PURPOSE: Institutional Development

DATUM: MSL

ADJACENT PROPERTY OWNERS:
See Form 4345

I:\ArcGIS\S\SFP-01 School\Map\BIO\PCN\Sheet1.mxd

VICINITY MAP

VISTA DEL MAR ELEMENTARY

South of proposed extension of
Del Sol Boulevard,
west of Surf Crest Drive
in South San Diego

WATERBODY: Unnamed Drainage

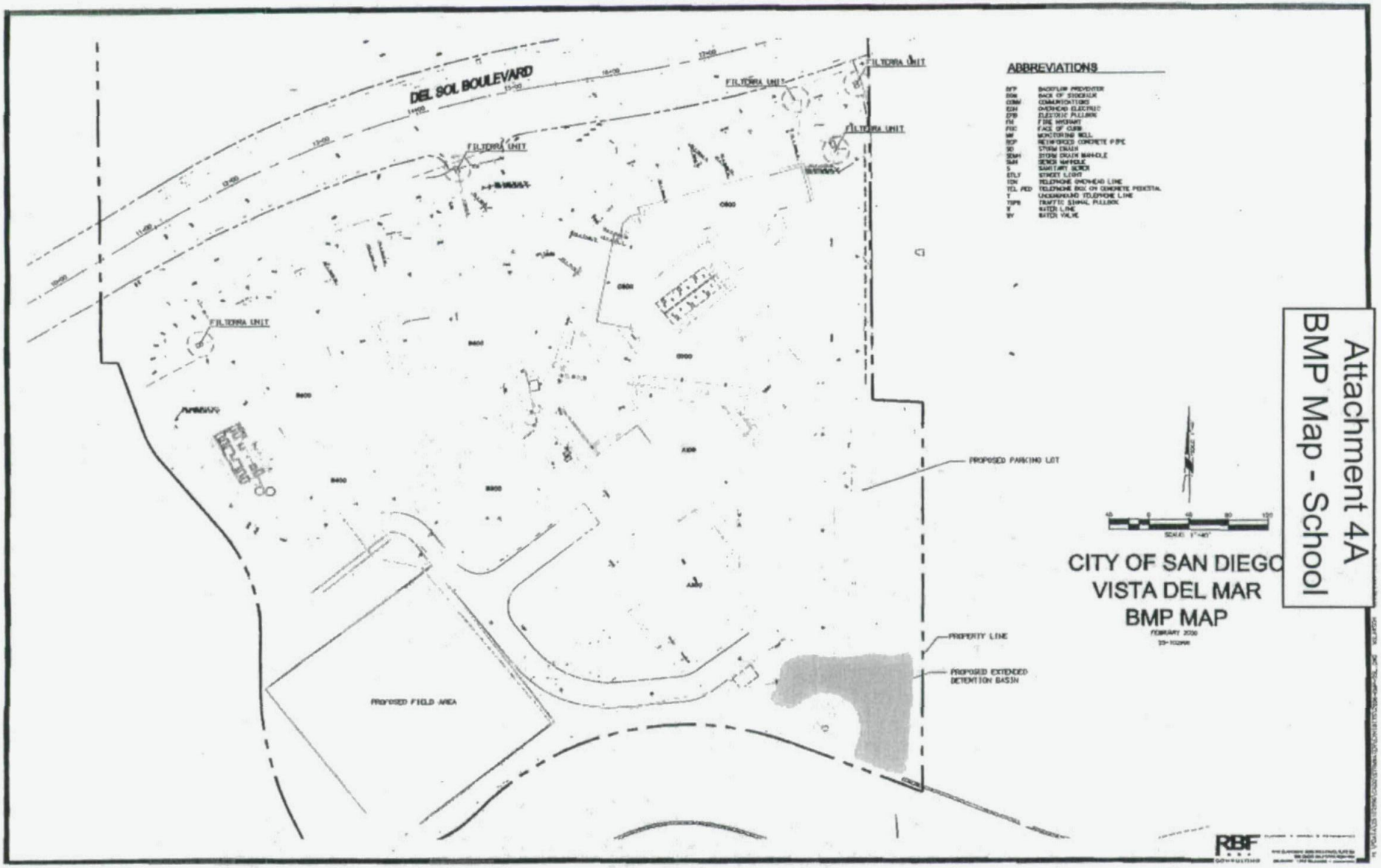
COUNTY: San Diego **STATE:** CA

APPLICANT: San Ysidro School District

AGENT: HELIX Environmental Planning, Inc.
7578 El Cajon Blvd. Suite 200
La Mesa, CA 91941

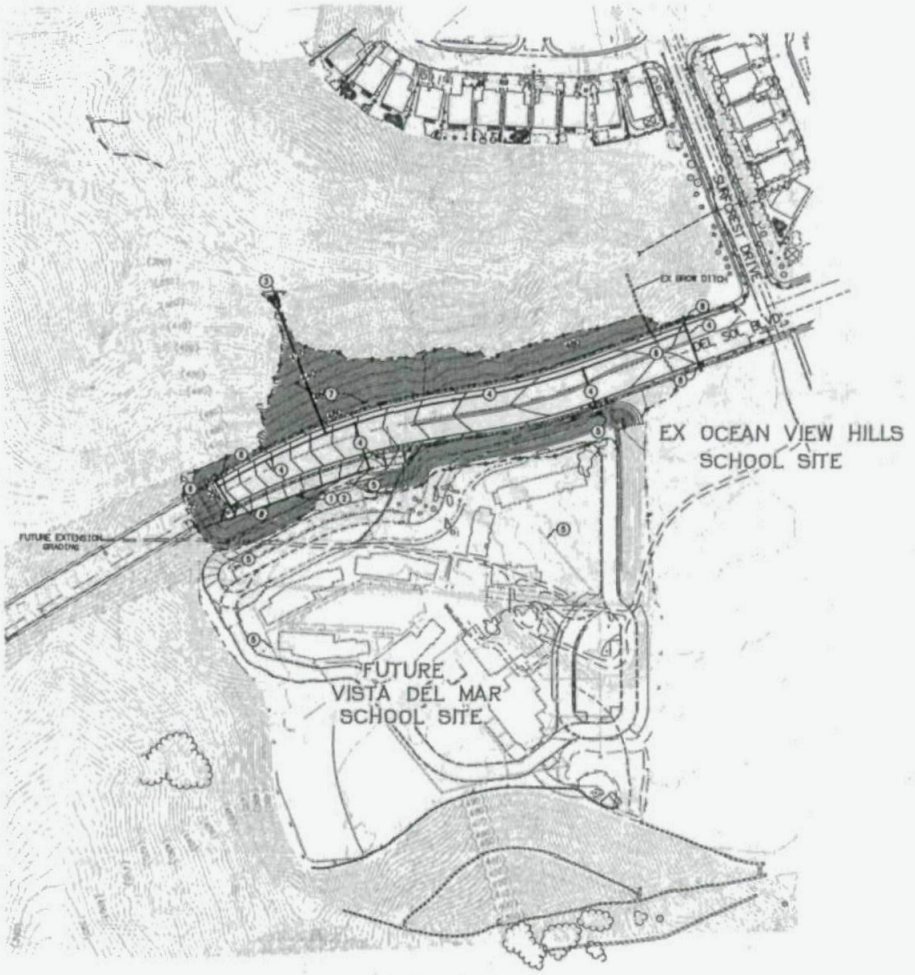
USGS Quadrangle: Imperial Beach
LAT: 32° 34' 16" N LONG: 117° 1' 43" W
T: 18S R: 1W S: 30

Sheet 1 of 7 **Date: 02/11/09**



Attachment 4A
BMP Map - School

Attachment 4B
BMP Map - Road



NOTE: DRAINAGE AREAS CAN BE SEEN ON THE INTERIM AND POST DEVELOPMENT HYDROLOGY MAPS IN THE PROJECT DRAINAGE REPORT INCLUDED AS ATTACHMENT F.

LEGEND

PROPOSED IMPERVIOUS PAVEMENT

BMP NOTES

SITE DESIGN

① RETAINING WALL
② STABILIZED DRAINAGE DITCH
③ RIP RAP ENERGY DISSIPATER (D-41)
④ PROPOSED STORM DRAIN
⑤ FUTURE STORM DRAIN PER SEPARATE APPLICATION

SOURCE CONTROL

⑥ STORM DRAIN INLET STENCILING
⑦ EFFICIENT HILLSIDE LANDSCAPE AND IRRIGATION

TREATMENT CONTROL/LID

⑧ CLEARWATER FILTRATION UNIT

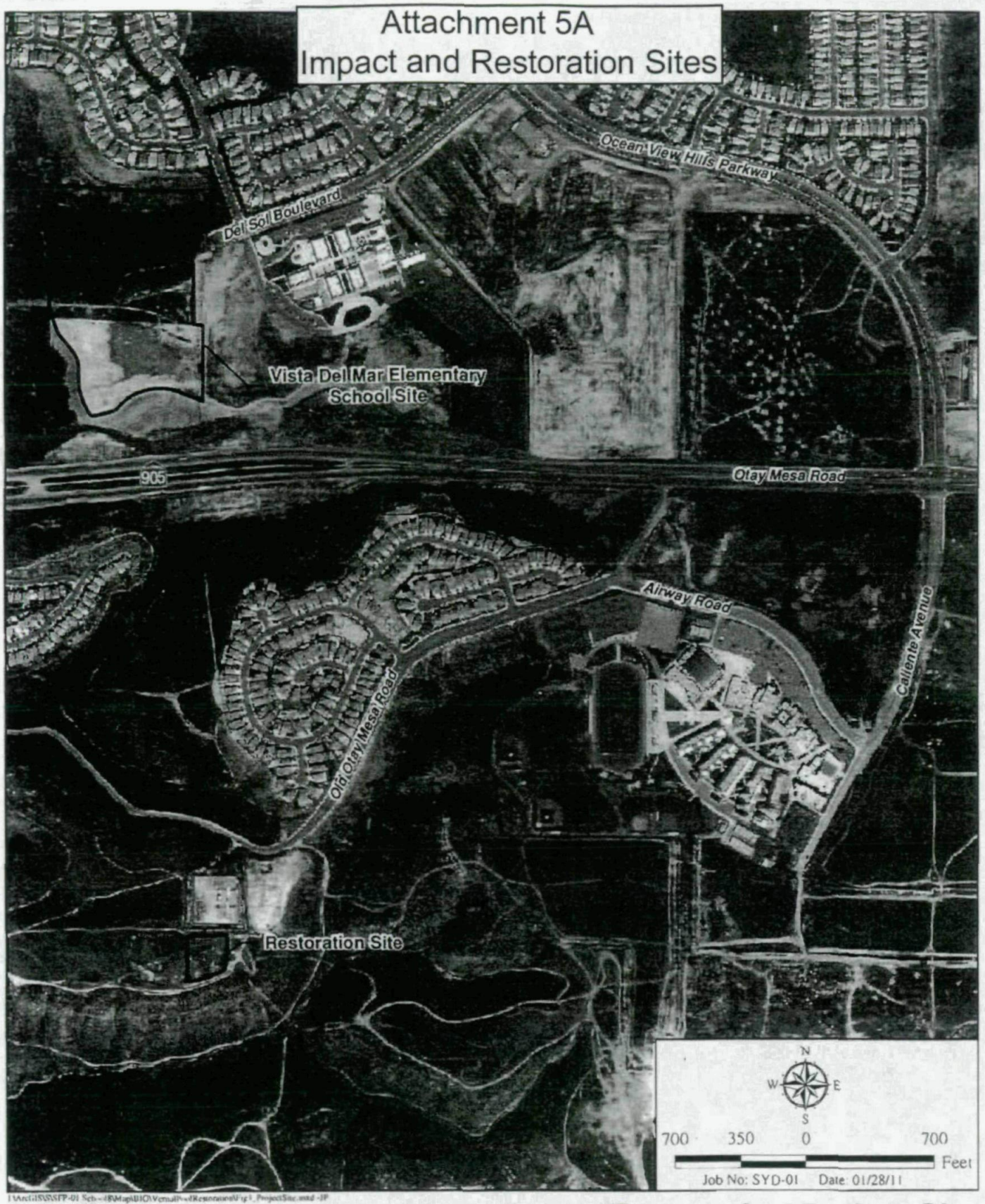
SCALE: 1"=100'

RBF CONSULTING — PLANNING ■ DESIGN ■ CONSTRUCTION

DEL SOL BOULEVARD
PHASE 1
PERMANENT BMP SITE PLAN

H:\PROJECTS\3503395\CADD\STORMWATER\EXHIBITS\3395-BMP SITE MAP2.DWG 165LK 5/14/08 4:27 pm

Attachment 5A
Impact and Restoration Sites



Restoration Project Site

VERNAL POOL RESTORATION PLAN FOR VISTA DEL MAR ELEMENTARY SCHOOL

HELIX

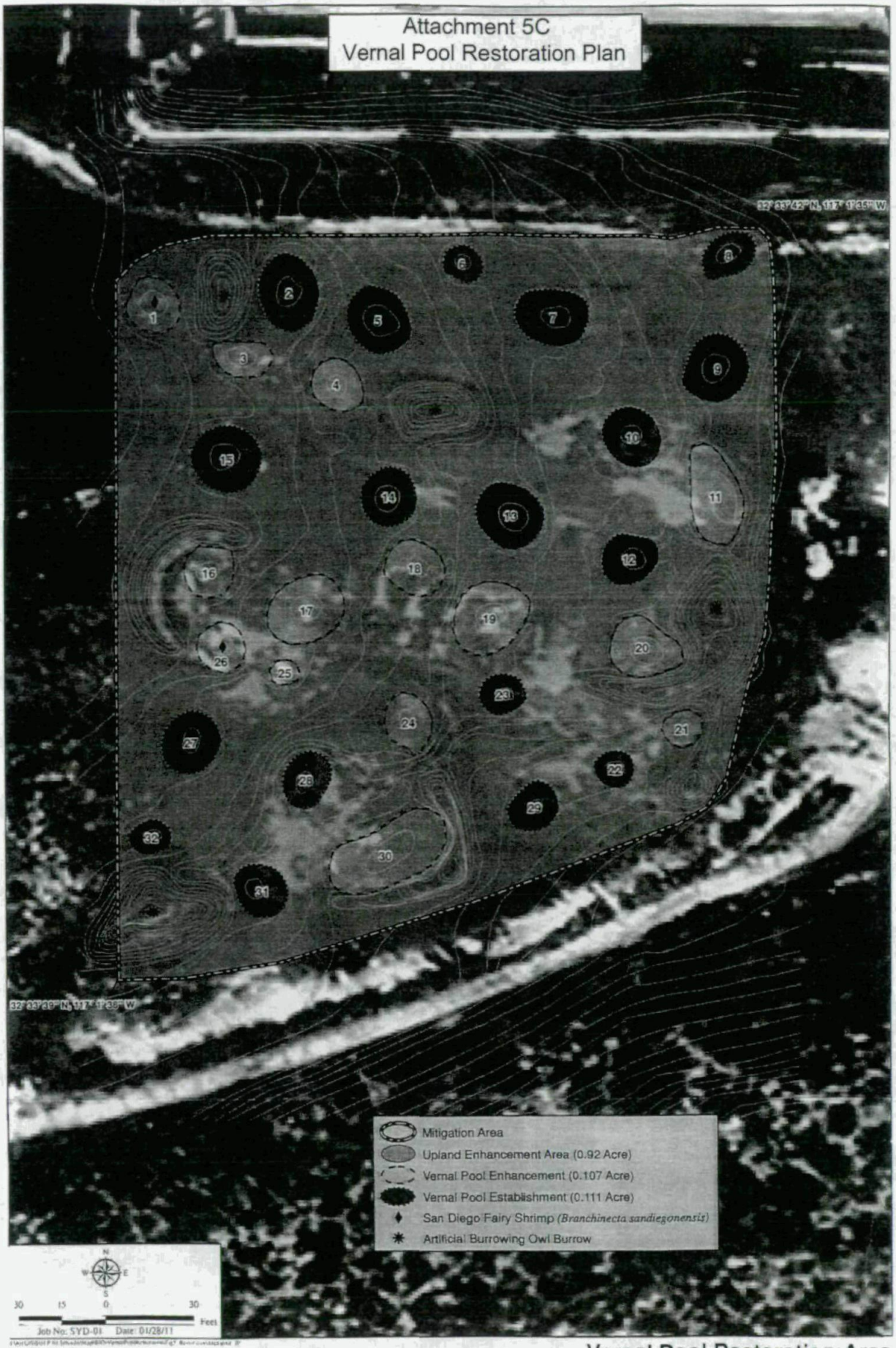
Figure 3

Vista Del Mar Impacts

VERNAL POOL RESTORATION PLAN FOR VISTA DEL MAR ELEMENTARY SCHOOL

HELIX

Figure 4



Vernal Pool Restoration Area

VERNAL POOL RESTORATION PLAN FOR DEL MAR VISTA ELEMENTARY SCHOOL

HELIX

Figure 5

Attachment 5D
Existing Vernal Pools at Restoration Site

Existing Vernal Pools

VERNAL POOL RESTORATION PLAN FOR DEL MAR VISTA ELEMENTARY SCHOOL

HELIX

Figure 6

ATTACHMENT 6
STREAM PHOTO DOCUMENTATION PROCEDURES

Standard Operating Procedure (SOP)

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

Introduction:

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

Equipment:

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

Required:

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

Optional:

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

How to Access Aerial Photographs:

Aerial Photos can be obtained from the following federal agencies:

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

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

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

Roles and Duties of Team:

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

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

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

Safety Concerns:

Persons involved in photo monitoring should **ALWAYS** put safety first. For safety reasons, always have at least two 2 volunteers for the survey. Make sure that the area(s) you are surveying either are accessible to the public or that you have obtained permission from the landowner prior to the survey.

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

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

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

General Instructions:

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

When taking photographs, try to include landscape features that are unlikely to change over several years (buildings, other structures, and landscape features such as peaks, rock outcrops, large trees, etc.) so that repeat photos will be easy to position. Lighting is, of course, a key ingredient so give consideration to the angle of light, cloud cover, background, shadows, and contrasts. Close view photographs taken from the north (i.e., facing south) will minimize shadows. Medium and long view photos are best shot with the sun at the photographer's back. Some artistic expression is encouraged as some photos may be used on websites and in slide shows (early morning and late evening shots may be useful for this purpose). Seasonal changes can be used to advantage as foliage, stream flow, cloud cover, and site access fluctuate. It is often important to

include a ruler, stadia rod, person, farm animal, or automobile in photos to convey the scale of the image. Of particular concern is the angle from which the photo is taken. Oftentimes an overhead or elevated shot from a bridge, cliff, peak, tree, etc. will be instrumental in conveying the full dimensions of the project. Of most importance overall, however, is being aware of the goal(s) of the project and capturing images that clearly demonstrate progress towards achieving those goal(s). Again, reference to *Suggestions for Photo Points by Type of Project* may be helpful.

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

Recording Information:

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

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

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

When monitoring the implementation of restoration, fuel reduction, or Best Management Practices (BMP) projects, include or attach to the photo-log a

narrative description of observable progress in achieving the goals of the project. Provide supplementary information along with the photo, such as noticeable changes in habitat, wildlife, and water quality and quantity.

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

The Photo Point: Establishing Position of Photographer:

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

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

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

Determining the Compass Bearing:

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

Suggestions for Photo Points by Type of Project:

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

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

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

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

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

All Restoration and Fuel Reduction Projects – Time Series:

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

Meadow Restoration:

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

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

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

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

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

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

Stream Restoration/stabilization:

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

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

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

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

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

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

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

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

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

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

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

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

Stream Sediment Load or Erosion Monitoring:

1. Long views from bridge or other elevated position.

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

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

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

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

PHOTO- LOG FORM

Project:
Location:
Date:
Photographer:
Team members:

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

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

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

Location:

Subject Description:

Date:

Time: