California Regional Water Quality Control Board
San Diego Region

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

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

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

January 16, 2008

In reply refer to: WPC:18-2006112:mporter

Mr. Ken Weinberg
Director of Water Resources
San Diego County Water Authority
4677 Overland Avenue
San Diego, CA 92123

WDID 9000001662
CIWQS:
Party No. 148276
Place No. 652333
Reg. No. 327010

SUBJECT: Action on Request for Clean Water Act Section 401 Water Quality Certification for the San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition project
Water Quality Certification No. 06C-112

Dear Mr. Weinberg:

Enclosed is the Clean Water Act Section 401 Water Quality Certification for the San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition project. A description of the project and project location can be found in the project information sheet, project location map, and project site maps which are included as Attachments 1 through 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 the San Diego County Water Authority has accepted and will comply with all conditions of the Certification. Failure to comply with all conditions of this Certification will result in enforcement actions against the San Diego County Water Authority.

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 notification, please call Mike Porter directly at (858) 467-2726 or by email via mporter@waterboards.ca.gov.

Mr. Weinberg
401 Certification 06C-112

January 16, 2008

Respectfully,

JOHN H. ROBERTUS
Executive Officer

Enclosure:

Clean Water Act Section 401 Water Quality Certification No. 07C-017 for the San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition project, with 6 attachments

CC: Refer to Attachment 2 of Certification 06C-112 for Distribution List.

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Linda Adams
Secretary for Environmental Protection

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Action on Request
for
Clean Water Act section 401 Water Quality Certification
And enrollment in
General Waste Discharge Requirements
for
Discharge of Dredged and/or Fill Materials

PROJECT: San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition
Certification No. 06C-112

APPLICANT: San Diego County Water Authority
Attention: Mr. Ken Weinberg
Director of Water Resources
4677 Overland Avenue
San Diego, CA 92123

WDID 9000001662
CIWQS:
Party No. 148276
Place No. 652333
Reg. No. 327010

ACTION:

- ☐ Order for Low Impact Certification
- ☐ Order for Denial of Certification
- ☑ Order for Technically-conditioned Certification
- ☐ Waiver of Waste Discharge Requirements
- ☑ Enrollment in SWRCB Order No. 2004-004 DWQ
- ☑ Enrollment in SWRB Order No. 2003-0017 DWQ

STANDARD CONDITIONS:

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

1. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the California Water Code and section 3867 of Title 23 of the California Code of Regulations (23 CCR).

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

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

ADDITIONAL CONDITIONS:

In addition to the three standard conditions, the San Diego County Water Authority must satisfy the following:

A. GENERAL CONDITIONS

1. The San Diego County Water Authority must, at all times, fully comply with the engineering plans, specifications and technical reports submitted with this application for Clean Water Act §401 Water Quality Certification and all subsequent submittals required as part of this certification.

2. The San Diego County Water Authority must enroll in and comply with the requirements of State Water Resources Control Board Water Quality Order No. 99-08-DWQ (Order 99-08), the NPDES General Permit for Storm Water Discharges Associated with Construction Activity.

3. The San Diego County Water Authority must maintain a copy of this certification, the application, and supporting documentation at the project site at all times for review by site personnel and agencies.

4. Prior to the start of the project, the San Diego County Water Authority must educate all personnel on the requirements in this certification, pollution prevention measures, and spill response.

5. The San Diego County Water Authority must permit the California Regional Water Quality Control Board – San Diego Region (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.

6. The San Diego County Water Authority must notify the Regional Board within 24 hours of any unauthorized discharge to waters of the U.S. and/or State; measures that were implemented to stop and contain the discharge; measures implemented to clean-up the discharge; the volume and type of materials discharged and recovered; and additional Best Management Practices (BMPs) or other measures that will be implemented to prevent future discharges.

7. The San Diego County Water Authority 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 reached a waters of the U.S. and/or State.

8. This Certification is not transferable to any person(s) except after notice to the Executive Officer of the Regional Board. The San Diego County Water Authority must submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new owner(s) containing a specific date for the transfer of this Certification's responsibility and coverage between the current discharger and the new discharger(s). This agreement must include an acknowledgement that the existing owner is liable for compliance and violations up to the transfer date and that the new owner(s) is/are liable from the transfer date on.

9. 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.

10. 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 be a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

11. 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.

12. The San Diego County Water Authority must comply with the requirements of State Water Resource Control Board Order No. 2003-0017-DWQ, Statewide General Waste Discharge Requirements for dredged material or fill discharges that have received State Water Quality Certification. This General Waste Discharge Requirement can be accessed at: http://www.swrcb.ca.gov/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf.

13. The San Diego County Water Authority must comply with the requirements of State Water Resource Control Board Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredge or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside Federal Jurisdiction. This General Waste Discharge Requirement can be accessed at: http://www.swrcb.ca.gov/resdec/wqorders/2004/wqo/wqo2004-0004.pdf.

14. The San Diego County Water Authority **must notify the Regional Board in writing at least 10 days prior to actual start date** for construction.

B. Construction Storm Water Management

1. All of the elements of following documents must be implemented and maintained by San Diego County Water Authority during project construction, and until the Regional Board terminates coverage of this project subject to Order 99-08:

    a) Summary of Information Contained in the 401 Water Quality Certification Application for the Mission Trails Flow Regulatory Structure II, Pipeline Tunnel, and Vent Demolition Project letter report, pages 10 and 11, dated January 24, 2007, received January 30, 2007, and prepared by Tierra Environmental Services.

    b) General Conditions and Standard Specifications, Section 02270 – Temporary Erosion Control, not dated, received December 17, 2007, and prepared by the San Diego County Water Authority.

c) Storm Water Pollution Prevention Plan Guidelines, not dated, received December 17, 2007, and prepared by the San Diego County Water Authority.

2. During construction and until Order 99-08 coverage is terminated for this project by the Regional Board, the San Diego County Water Authority must implement, but not be limited to the following categories of storm water Best Management Practices:

a) Housekeeping.
b) Solid waste containment.
c) Erosion control.
d) Sediment control.
e) Construction materials delivery and storage.
f) Hazardous materials and waste management and storage.
g) Concrete waste management.
h) Vehicle and equipment maintenance.
i) Re-planting grubbed/cleared/graded areas.

C. MITIGATION

1. The proposed project must not:

a) Permanently impact (fill) more than 0.1153-acre (606-linear feet) of unvegetated waters of the U.S. and State.

b) Permanently fill more than 0.0042-acre (47-linear feet) of vegetated waters of the U.S. and State.

c) Temporarily fill more than 0.0425-acre (53-linear feet) of unvegetated waters of the U.S. and State.

d) Temporarily fill more than 0.0398-acre (94-linear feet) of vegetated waters of the U.S. and State.

e) Cumulatively impact more than 0.2018-acre of waters of the U.S. and State.

f) Discharge waste (fill) to more than 0.051 acre (229- linear feet) of isolated waters of the State (vernal pools and basins).

2. Compensatory mitigation for proposed permanent impacts to waters of the U.S. and State from the project is proposed as:

a) The onsite creation of 0.265-acre (2.22:1 ratio) Southern cottonwood willow riparian forest.

b) The onsite enhancement (weeding) of 0.1123-acre of riverbank (Southern cottonwood willow riparian forest).

3. Compensatory mitigation for proposed permanent impacts to isolated waters of the State (vernal pools and basins) from the project is proposed as the onsite creation of 0.153-acre of vernal pools.

4. Mitigation must be implemented as described in the following documents:

a) Application for Clean Water Act Section 401 Water Quality Certification for the San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition, Attachment C. Mitigation and Monitoring Plan, prepared by Tierra Environmental Services, and dated October 25, 2006.

b) Application for Clean Water Act Section 401 Water Quality Certification for the San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition, Attachment A (revised), prepared by Tierra Environmental Services, and received by email on November 29, 2007.

c) Vernal Pool Mitigation Plan for the San Diego County Water Authority Mission Trails Flow Regulatory Structure (FRS) II, Pipeline Tunnel and Vent Demolition Project, prepared by Chuck Black (Ecological Restoration Service), and dated September 27, 2007.

5. The San Diego County Water Authority must monitor and maintain the mitigation areas until success criteria is met as described in Additional Conditions 4.a), 4.b), and 4.c).

6. **Within 90 days of the issuance of this certification**, the San Diego County Water Authority must provide a draft preservation mechanism (e.g. deed restriction, conservation easement, etc.) that will protect all mitigation areas and their buffers in perpetuity. The conservation easement 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 or 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 conservation easement or other appropriate 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 functions and values of the site. Other infrastructure development to be prohibited includes, but is not limited to, additional utility lines, paved maintenance roads, and areas of maintained landscaping for recreation. The San Diego County Water Authority must **submit proof of a completed preservation mechanism within one year of issuance of this certification**.

7. The San Diego County Water Authority must **submit a report (including topography maps and planting locations) to the Regional Board within 90 days of completion of mitigation site preparation and planting**, describing as-built status of the mitigation project. If the site grading and planting are not completed within six weeks of each other, separate reports will be submitted describing those specific as-built conditions.

8. The construction of proposed **mitigation must be completed within the same calendar year as impacts occur, or at least no later than 9 months following the close of the calendar year in which impacts first occur** (e.g., if impacts occur in June 2003, construction of mitigation for all impacts must be completed no later than September 2004). Delays in implementing mitigation must result in an increased mitigation ratio by 1.0 acre for each acre of impact for each year, or part thereof, of delay.

9. Mitigation areas must be maintained free of perennial exotic plant species including, but not limited to, pampas grass, giant reed, tamarisk, sweet fennel, tree tobacco, castor bean, and pepper tree. Annual exotic plant species must not occupy more than 5 percent of the onsite or offsite mitigation areas.

10. If at any time during the implementation and establishment of the mitigation area(s), and prior to verification of meeting success criteria, a catastrophic natural event (e.g., fire, flood) occurs and impacts the mitigation area, the San Diego County Water Authority, or future owners, must be responsible for repair and replanting of the damaged area(s).

11. **Mitigation monitoring reports must be submitted annually on August 1, with the first report due on August 1, 2008**, until mitigation has been deemed successful by the Regional Board or by Regional Board deference to another resource agency. 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;

c) Qualitative and quantitative comparisons of current mitigation conditions with pre-construction conditions and previous mitigation monitoring results;
d) Photodocumentation from established reference points;
e) Survey report documenting boundaries of mitigation area; and
f) Other items specified in the draft and final Wetland and Riparian Mitigation and Monitoring Plan.

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

13. For purposes of this certification, creation is defined as the creation of vegetated or unvegetated waters of the U.S. where they have never been documented or known to occur (e.g., conversion of nonnative grassland to freshwater marsh). Restoration is defined as the creation of waters of the U.S. where they previously occurred (e.g., removal of fill material to restore a drainage). Enhancement is defined as modifying existing waters of the U.S. to enhance functions and values (e.g., removal of exotic plant species from jurisdictional areas and replacing with native species).

D. Arizona-Style River Crossing

1. The constructed Arizona-style low-flow river crossing must not cause or induce scour, erosion, headward cutting, or downward cutting into the active channel, bed, or banks of the San Diego. Any type of non-span crossing of a waterbody is a hydromodification, and as such has the potential to change the morphology and intrinsically alter the physical integrity of that waterbody.

2. The San Diego County Water Authority must conduct a pre-construction survey of the active channel, bed, and banks of the San Diego for a distance of 100-meters upstream and downstream of the proposed crossing location. The survey will look for and document evidence of scour, erosion, headward cutting, downward cutting, or knickpoints into the active channel, bed, or banks of the San Diego River. The purpose of this survey is to establish baseline conditions to which future surveys would be compared. **The pre-construction survey report is due 30 days after issuance of the Certification.**

3. The San Diego County Water Authority must conduct annual post-construction surveys of the active channel, bed, and banks of the San Diego for a distance of 100-meters upstream and downstream of the proposed crossing location. The survey will look for and document evidence of scour, erosion, headward cutting, downward cutting, or knickpoints into the active channel, bed, or banks of the San Diego River that may have been caused by the crossing. Surveys shall be conducted during the month of September, prior to the first wet season rain.

4. Annual surveys must be done for at least 5 years, and until the Regional Board is satisfied that the crossing has not and will not cause changes to the physical integrity of the San Diego River. **The annual survey reports are due August 1, with the first report due August 1, 2008.**

5. If the crossing does induce morphologic changes to the San Diego River, corrections must be proposed to the Regional Board. Corrections could include, but not limited to, modifying the crossing, removing and replacing with a better design, or complete removal of the crossing.

6. An alternative method of compliance with Additional Conditions D.1. through D.5. is to design a crossing that matches Manning's coefficient of friction of the San Diego River for a distance of 100-meters upstream and downstream of the proposed crossing. The purpose of this design would be to ensure that water flow over the crossing does not accelerate or slow down, as changes in water velocity lead to waterbody hydromodification. Compliance with this alternative would require submittal of a report to the Regional Board, signed by a Professional Engineer employed by the San Diego County Water Authority, documenting that the designed coefficient of friction of the crossing matches the San Diego River for a distance of 100–meters upstream and downstream of the crossing. If selected as the preferred alternative for evaluating compliance, this **report would be due one 30 days prior to construction of the river crossing.**

E. STREAM PHOTO DOCUMENTATION PROCEDURE

The San Diego County Water Authority must conduct photo documentation of the project site 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 6. In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced. The Applicant must submit this information in a photo documentation report to the Regional Board with the Mitigation Maintenance and Monitoring reports. The report must include a compact disc that contains digital

files of all the photos (jpeg file type or similar). **This report is due 30 days after construction ceases.**

F. Post-construction Best Management Practices Photo Documentation Procedure

The San Diego County Water Authority must conduct photo documentation of implemented post-construction BMPs. Photo-documentation must be modeled after the State Water Resources Control Board Standard Operating Procedure 4.2.1.4: Stream Photo Documentation Procedure, included as Attachment 6. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced. The Applicant must submit this information in a photo documentation report to the Regional Board with the Mitigation Maintenance and Monitoring reports. The report must include a compact disc that contains digital files of all the photos (jpeg file type or similar). **This report is due 30 days after construction ceases.**

G. Geographic Information System Reporting

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

H. Reporting

1. All information requested in this Certification is pursuant to California Water Code (CWC) section 13267. Pursuant to CWC section 13268, a civil liability may be administratively imposed by the Regional Board for failure to furnish requested information.

2. All reports and information submitted to the Regional Board must submitted in both hardcopy (paper) and electronic formats.

3. All applications, reports, or information must be submitted to:

   Executive Officer
   California Regional Water Quality Control Board

San Diego Region
Attn: 401 Certification No. 06C-112, Central Watershed Unit
9174 Sky Park Court, Suite 100
San Diego, California 92123

4. 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)**
Construction Notification	A. 14	Within 10 days prior to commencement of construction.
Mitigation	C.6	Within 90 days of issuance of Certification for draft Preservation and one year of issuance of Certification for Preservation.
Mitigation	C.7	Within 90 days of completion of mitigation site preparation and grading.
Mitigation	C.11	First report due August 1, 2008; remaining reports due annually on August 1.
Arizona Crossing	D.4	Pre-construction survey report due within 30 days after issuance of Certification. Post-construction annual survey reports due August 1 until 2012.
Arizona Crossing	D.6	Report due 30 days before river crossing construction.
Stream Photo Documentation	E.	Within 30 days after construction ceases.
Post-Construction Photo Documentation	F.	Within 30 days after construction ceases.
GIS	G.	Within 30 days after mitigation construction ceases.

I. SIGNATORY REQUIREMENT

1. All applications, reports, or information submitted to the Regional Board must be signed 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.

2. A duly authorized representative of a person designated in Items 1.a. through 1.c. above may sign documents if:

    a) The authorization is made in writing by a person described in Items 1.a. through 1.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.

3. All applications, reports, or information submitted to the Regional Board Executive Officer must be 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."

PUBLIC NOTIFICATION OF PROJECT APPLICATION:

On November 11, 2006, receipt of the project application was posted on the Regional Board web site to serve as appropriate notification to the public.

REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON:

Mike Porter
Engineering Geologist
Central Watershed Protection Unit
9174 Sky Park Court, Suite 100
San Diego, CA 92123
858-467-2726
mporter@waterboards.ca.gov

WATER QUALITY CERTIFICATION:

I hereby certify that the proposed discharge from the **San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition** project (Certification No. 06C-112) 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 Resource Control Board Order Nos. 2004-004 and 2003-017 for isolated and non-isolated Waters of the State. Please note that enrollment under Order Nos. 2004-004 and 2003-017 is conditional and, should new information come to our attention that indicates a water quality problem, the Regional Board may issue individual waste discharge requirements at that time.

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

John H. Robertus
Executive Officer
Regional Water Quality Control Board

16 January 2008
Date

Attachments:

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

ATTACHMENT 1
PROJECT INFORMATION

Applicant:	San Diego County Water Authority Mr. Ken Weinberg Director of Water Resources 4677 Overland Avenue San Diego, CA 92123 Telephone: 858-522-6753 Facsimile: 858-268-7881 E-mail: KWeinberg@sdcwa.org
Applicant Representative:	Tierra Environmental Services Mr. Chris Nordby Principal Biologist 9915 Business Park Avenue Suite C San Diego, CA 92131-1120 Telephone: 858-578-9064 Facsimile: 858-578-3646 E-mail: TierraEnv@aol.com
Project Name:	San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition (06C-112)
Project Location:	The project is located in the central-west County of San Diego, City of San Diego, Mission Trails Regional Park, east of and adjacent to community of Tierra Santa, between I-52 and Jackson Drive, and crosses the San Diego River. The center of the project is approximately located at latitude 32° 50' 30" north, longitude 117° 02' 30" east.
Type of Project:	Water pipeline (aqueduct) infrastructure maintenance and construction.
Project Description:	The project consists of: 1. Construction of an underground 19-million gallon reservoir.

2. Removal of two pipelines and ten vents.
3. Construction of two, 96-inch diameter pipelines within a tunnel.
4. Construction (widening) of an existing, permanent, stabilized Arizona-style crossing over the San Diego River.
5. Removal of an existing (degraded concrete) Arizona-style crossing over the San Diego River.

Federal Agency/Permit:	▪ Army Corps of Engineers, Nationwide Permit 14. ▪ U.S. Fish and Wildlife Service, Section 7 Consultation.
Other Required Regulatory Approvals:	California Department of Fish and Game, Streambed Alteration Agreement.
California Environmental Quality Act (CEQA) Compliance:	▪ Final Environmental Impact Report for the San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel, and Vent Demolition Project, SCH No. 2005041025, August 2005. ▪ Notice of Determination for Environmental Impact Report for the Mission Trails Flow Regulatory Structure (FRS) II, Pipeline Tunnel, and Vent Demolition Project, San Diego County Water Authority (SCH No. 2005041025), August 24, 2006.
Receiving Water:	San Diego River, unnamed ephemeral tributaries to the San Diego River, vernal pools, and vernal basins. San Diego Hydrologic Unit, Lower San Diego hydrologic area, Mission San Diego hydrologic subarea (907.11).
Impacted Waters of the United States and State:	The proposed project will: ▪ Permanently impact (fill) 0.1153-acre (606-linear feet) of unvegetated waters. ▪ Permanently fill 0.0042-acre (47-linear feet) of vegetated waters.

- Temporarily fill 0.0425-acre (53-linear feet) of unvegetated waters.
- Temporarily fill 0.0398-acre (94-linear feet) of vegetated waters.
- Combined impacts are 0.2018-acre and 800-linear feet.

Impacted Isolated Waters of the State:	The proposed project will discharge waste (fill) to 0.051 acre (229- linear feet) of isolated waters of the State (vernal pools and basins).
Dredge Volume:	None
Related Projects Implemented/to be Implemented by the Applicant(s):	San Diego County Water Authority has not disclosed a related project.
Compensatory Mitigation:	Compensatory mitigation for proposed permanent impacts to waters of the U.S. from the project is proposed as the onsite: ▪ Creation of 0.265-acre (2.22:1 ratio) Southern cottonwood willow riparian forest. ▪ Enhancement (weeding) of 0.1123-acre of riverbank (Southern cottonwood willow riparian forest). Compensatory mitigation for proposed permanent impacts to isolated waters of the State (vernal pools and basins) from the project is proposed as the onsite creation of 0.153-acre of vernal pools. Mitigation is described in the following documents: ▪ Application for Clean Water Act Section 401 Water Quality Certification for the San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition, Attachment C. Mitigation and

Monitoring Plan, prepared by Tierra Environmental Services, and dated October 25, 2006.

- Application for Clean Water Act Section 401 Water Quality Certification for the San Diego County Water Authority Mission Trails FRS II, Pipeline Tunnel and Vent Demolition, Attachment A (revised), prepared by Tierra Environmental Services, and received by email on November 29, 2007.

- Vernal Pool Mitigation Plan for the San Diego County Water Authority Mission Trails Flow Regulatory Structure (FRS) II, Pipeline Tunnel and Vent Demolition Project, prepared by Chuck Black (Ecological Restoration Service), and dated September 27, 2007.

Best Management Practices (BMPs):

This project is subject to the General Storm Water Permit for Construction Activity (SWRCB Order 99-08). This Order requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) The San Diego County Water Authority has not yet prepared a SWPPP for this project. A contractor-prepared SWPPP will be prepared after permitting is complete, after contractor bidding is complete, and after a contractor is selected. However, the San Diego County Water Authority has submitted documents that describe their criteria for the preparation of an adequate SWPPP by a contractor. Theses documents are:

Summary of Information Contained in the 401 Water Quality Certification Application for the Mission Trails Flow Regulatory Structure II, Pipeline Tunnel, and Vent Demolition Project letter report, dated January 24, 2007, received January 30, 2007, and prepared by Tierra Environmental Services.

General Conditions and Standard Specifications, Section 02270 – Temporary Erosion Control, not dated, received December 17, 2007, and prepared by the San Diego County Water Authority.

Storm Water Pollution Prevention Plan Guidelines, not dated, received December 17, 2007, and prepared by the San Diego County Water Authority.

Collectively these three documents state that standard construction structural and non-structural Best Management Practices (BMPs) will be in a SWPPP and the SWPPP implemented when the project commences. Some of these BMP categories include:

- Housekeeping.
- Solid waste containment
- Erosion control.
- Sediment control.
- Construction materials delivery and storage.
- Hazardous materials and waste management and storage.
- Concrete waste management.
- Vehicle and equipment maintenance.
- Re-planting grubbed/cleared areas.

Public Notice: November 16, 2006

Fees: Total Due: $1361.08
Total Paid: $500.00 (check No. 5942)
Total Paid: $861.08 (check No. 5987)

ATTACHMENT 2
DISTRIBUTION LIST

Mr. Robert Smith
U.S. Army Corps of Engineers
San Diego Field Office
16885 West Bernardo Drive
Suite 300A
San Diego, CA 92127

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

Ms. Elizabeth Goldmann
Wetlands Regulatory Office
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Mr. Chris Nordby
Tierra Environmental Services
9915 Business Park Avenue
Suite C
San Diego, CA 92131-1120

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

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

ATTACHMENT 3

LOCATION MAPS

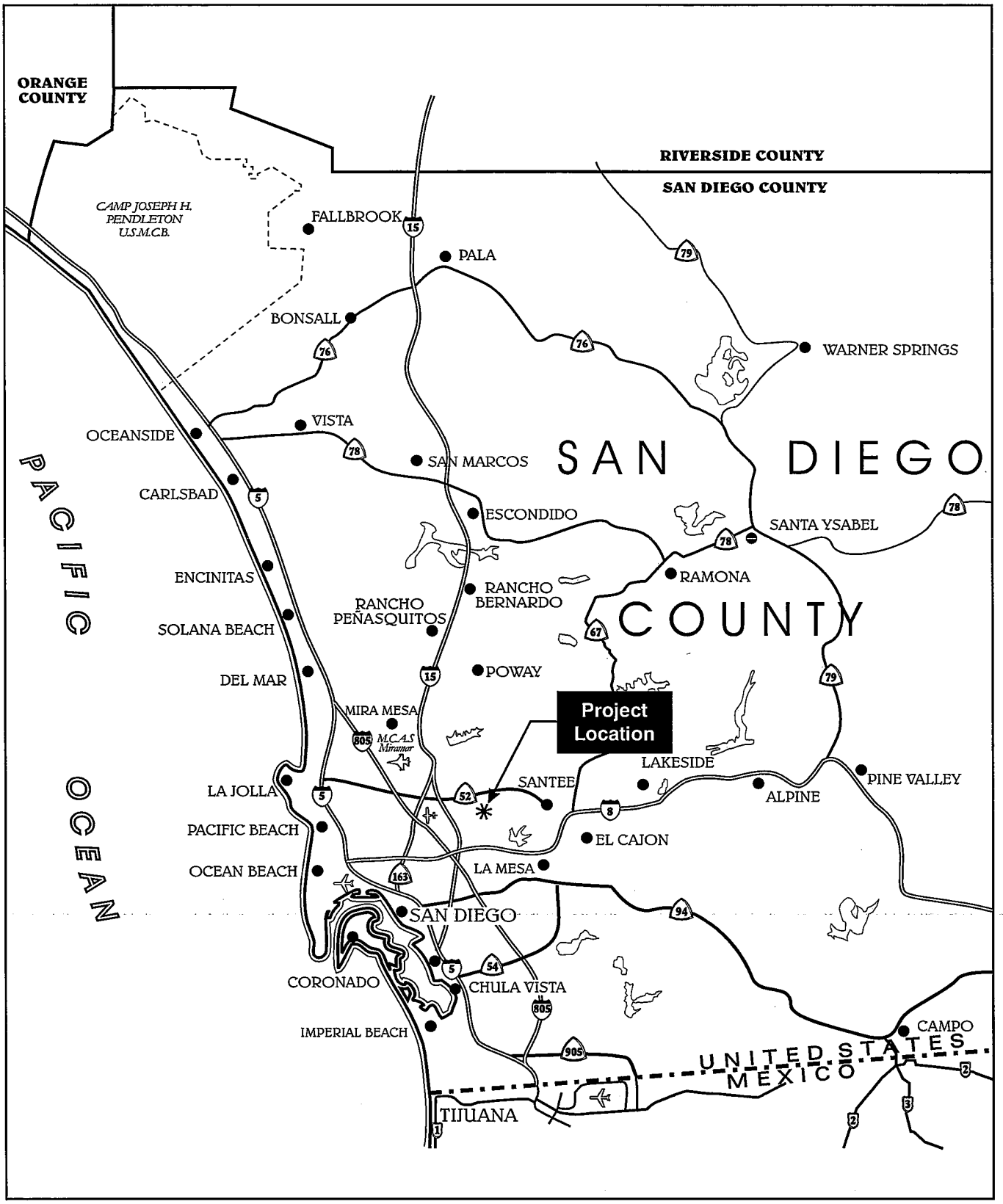

Figure 1
Regional Location Map

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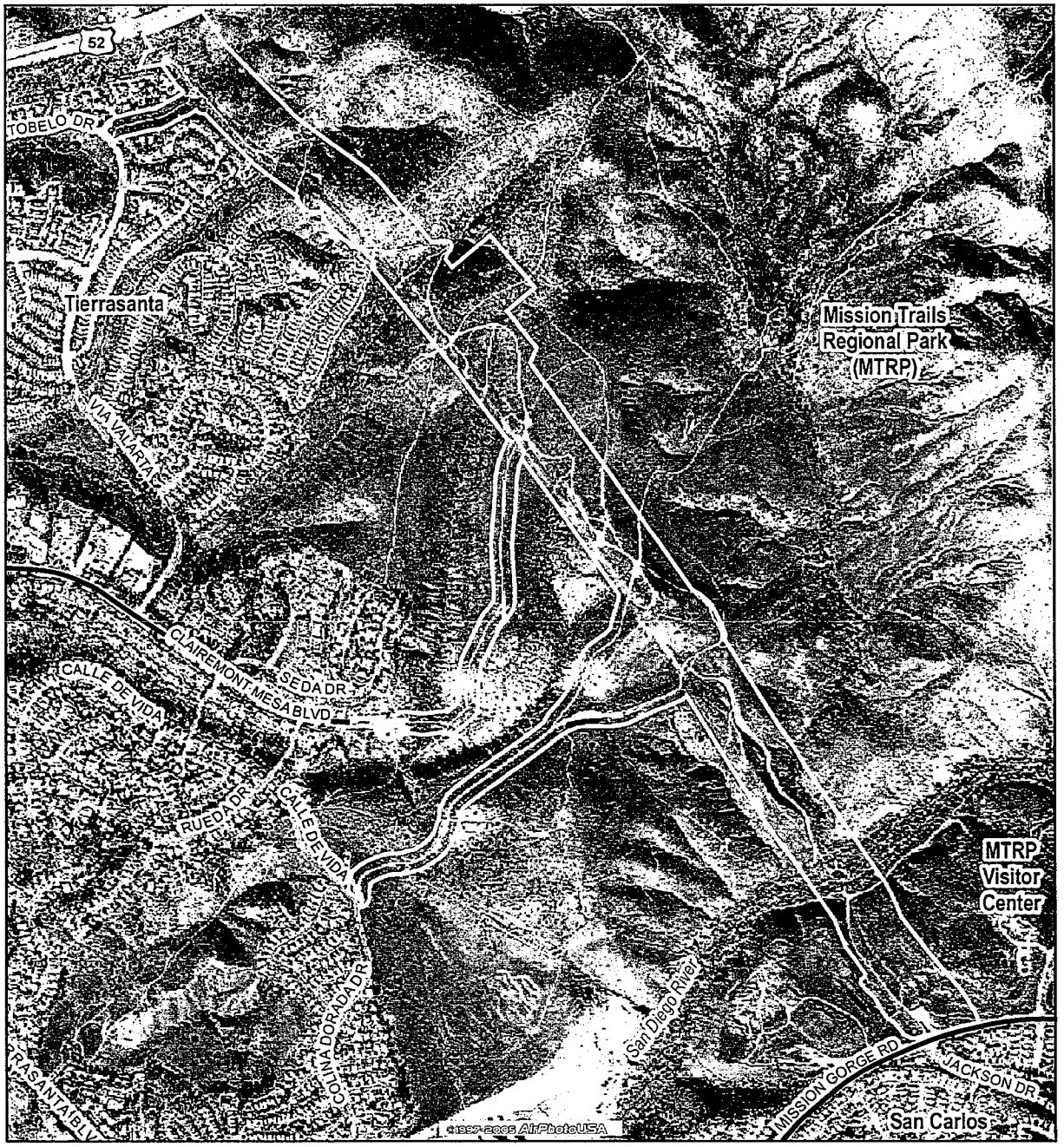
ENVIRONMENTAL SERVICES

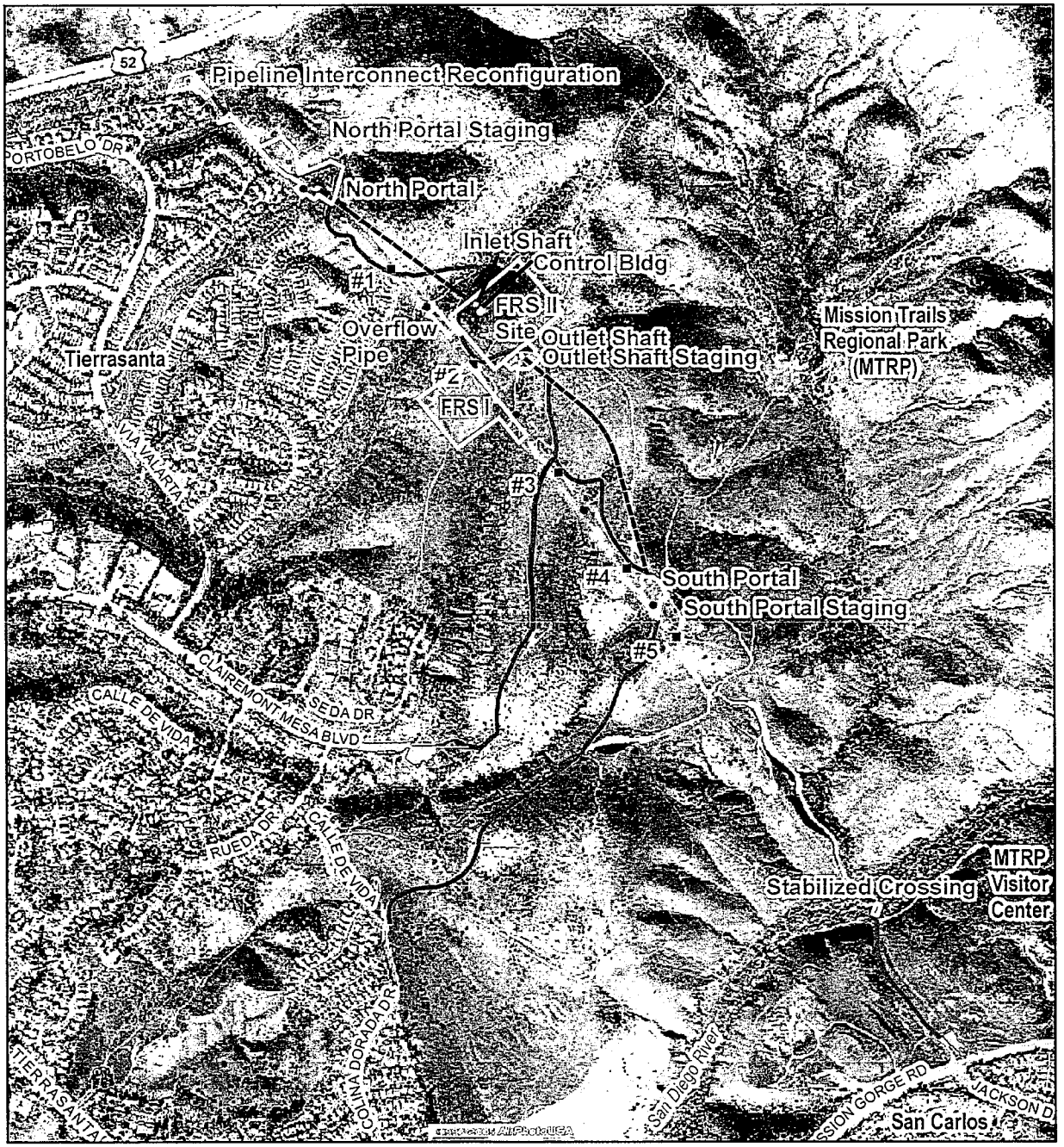


SOURCE: TAIC

Figure 2
Project Study Area

ATTACHMENT 4

SITE MAPS

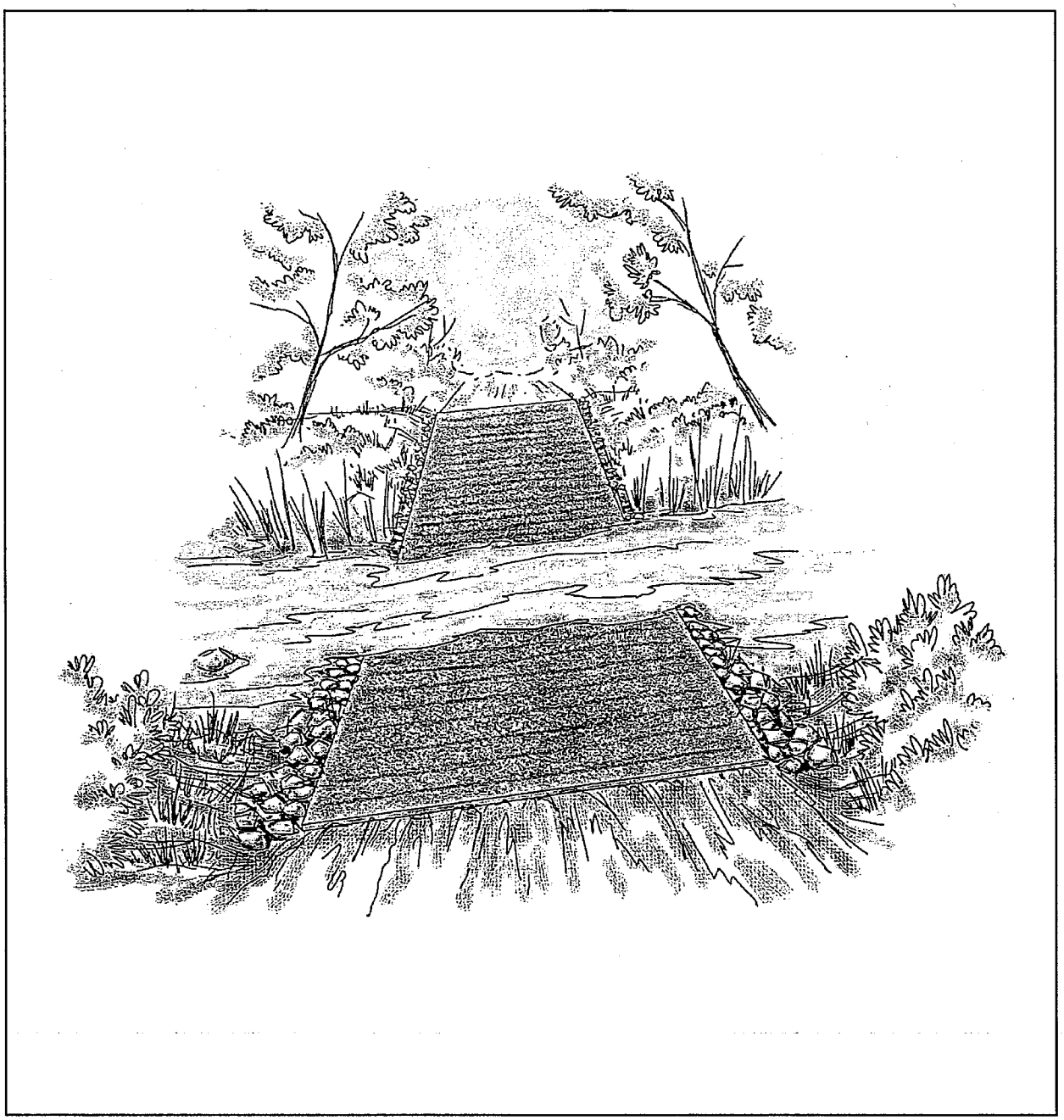


SOURCE: TAIC

Figure 3
Project Components
(FRS I is an Existing Facility)

SOURCE: TAIC

Figure 4
Proposed Improved River Crossing Location



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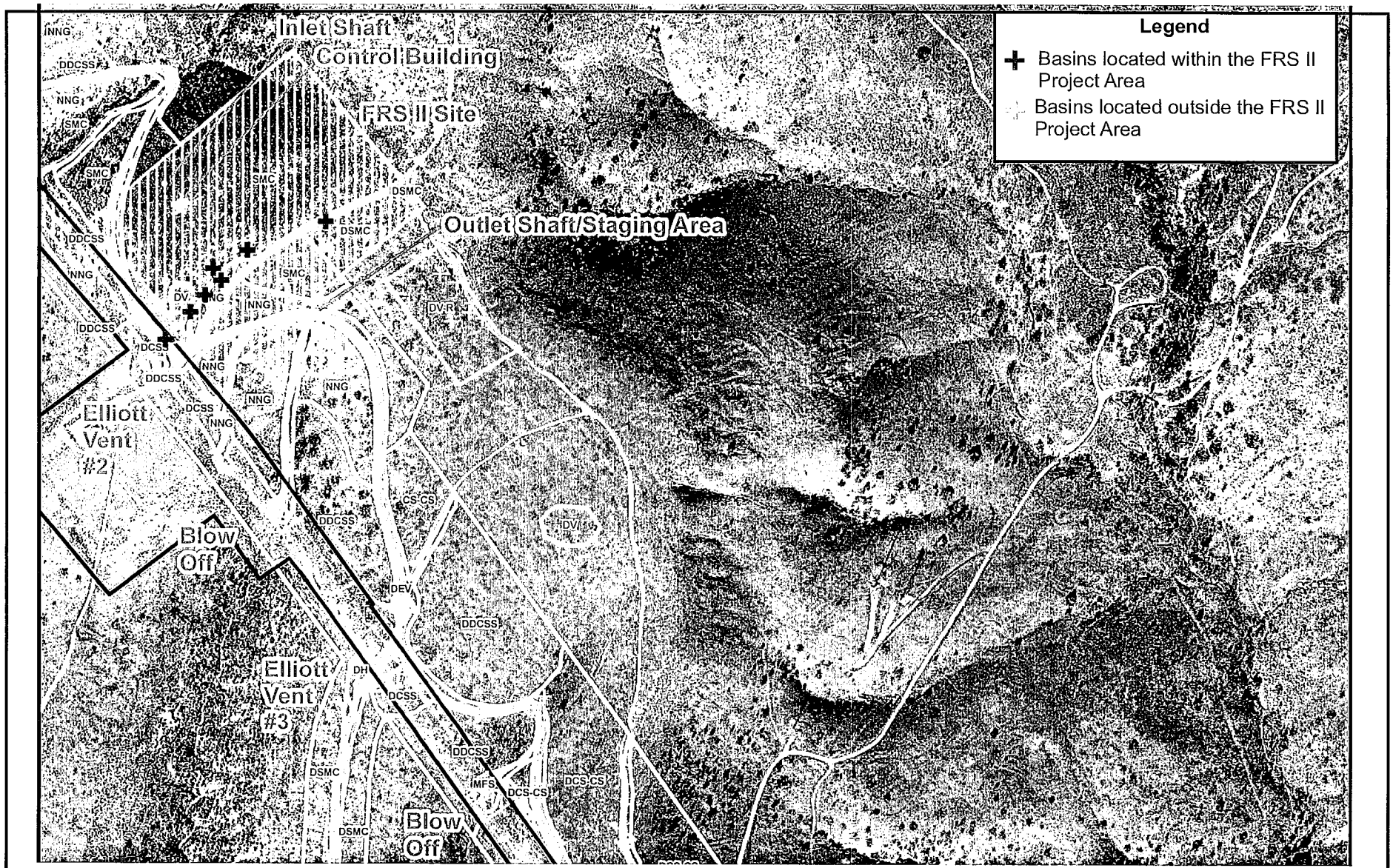
Mission Trails Flow Regulatory Structure II, Pipeline Tunnel, and Vent Demolition Project

Map Notes

SOURCE: TAIC

Figure 5
Artist Rendering of Proposed Improved River Crossing



Source: AirPhotoUSA

Figure 4

Location of Basins Sampled During the 2004/2005 Rainfall Season

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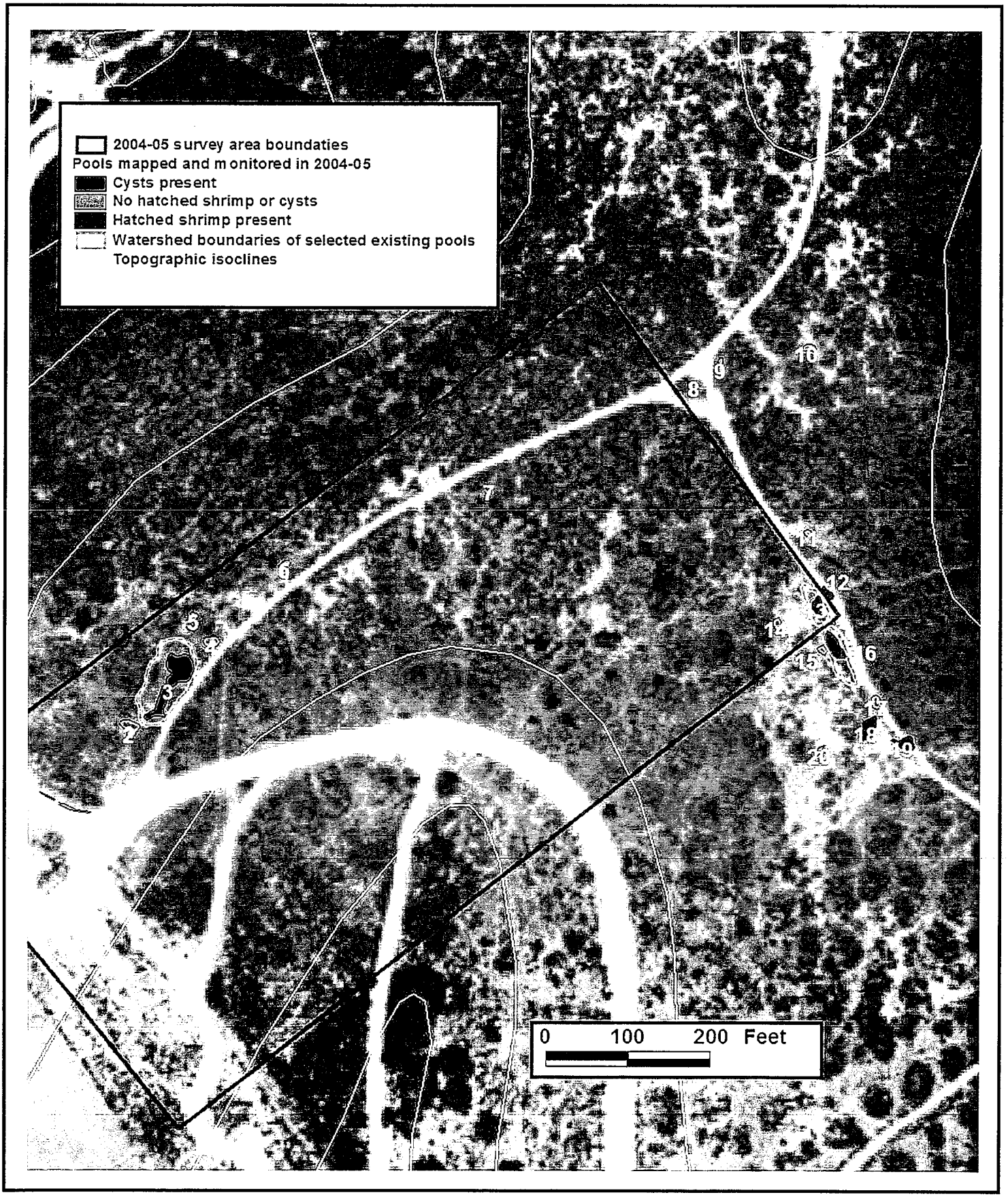
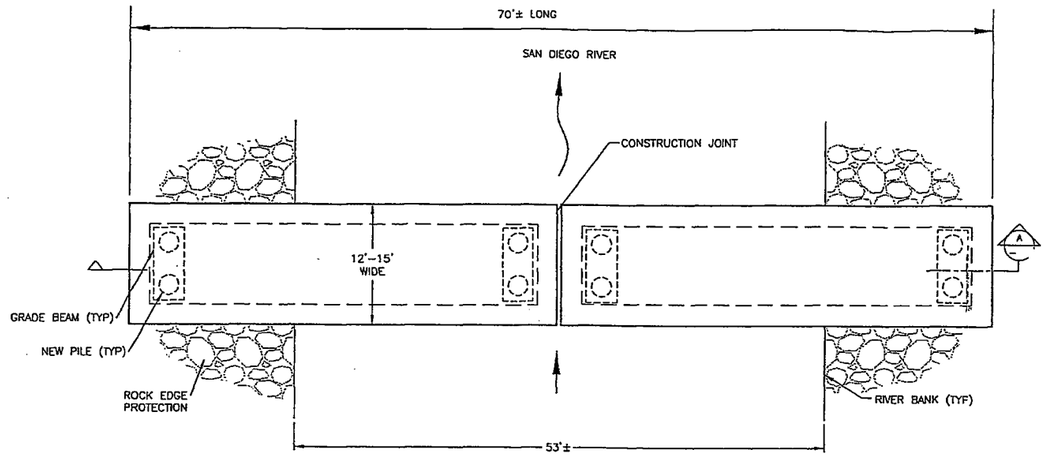
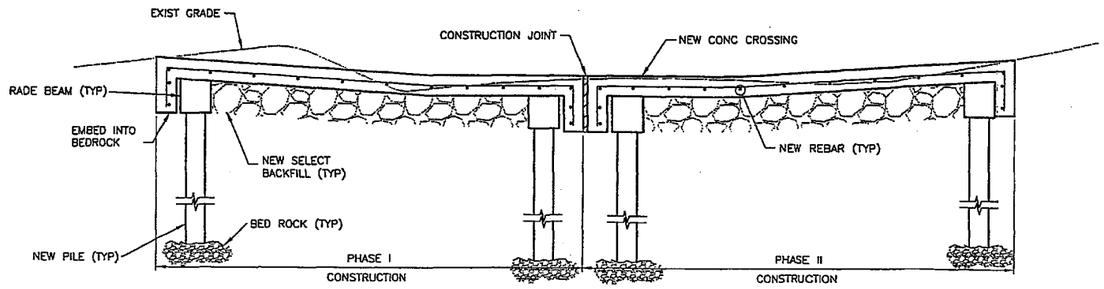


Figure 5 - Basins sampled in 2004-05, classified by fairy shrimp presence.



PLAN



SECTION A

RIVER CROSSING DETAIL
NO SCALE

30% SUBMITTAL
REVIEW COPY ONLY
NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	DWN	CKD	APPR

HIRSCH & COMPANY
CONSULTING ENGINEERS
4499 RUFFIN ROAD, STE. 300
SAN DIEGO, CALIFORNIA 92123
PHONE (858) 565-4545 / FAX (858) 565-4541

REGISTERED PROFESSIONAL ENGINEER — BRIAN R. REAM — No. 60899 — Exp. 12/31/08 — CIVIL — STATE OF CALIFORNIA

DESIGN BY –	APPROVED FOR CONSTRUCTION
	DIRECTOR OF ENGINEERING DATE
DRAWN BY –	
	ASST. DIRECTOR OF ENGINEERING DATE
CHECKED BY –	
	PROJECT MANAGER DATE

San Diego County Water Authority

SAN DIEGO COUNTY WATER AUTHORITY
4677 OVERLAND AVENUE, SAN DIEGO, CA 92123, 858-522-6600
610 W. FIFTH AVENUE, ESCONDIDO, CA 92025, 760-480-1991

MISSION TRAILS PIPELINE TUNNEL & VENT DEMOLITION

30% DESIGN
SAN DIEGO RIVER
CROSSING DETAIL

SPEC. NO.
DRAWING NO. C-28
SHEET NO. – OF –

CO Path U:\05\009\Eng\SHTs\C-28.dwg

Original scale in inches

SOURCE: TAIC

Figure 6
San Diego River Crossing Detail

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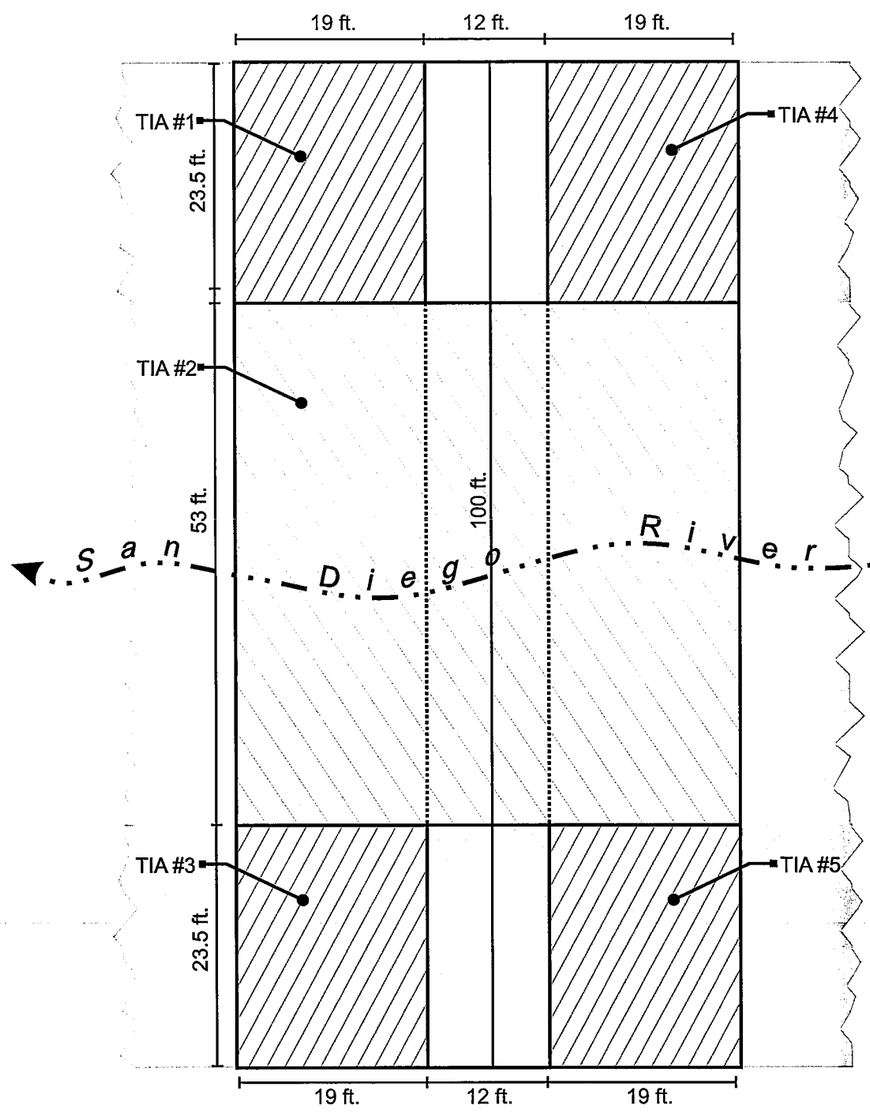
ENVIRONMENTAL SERVICES

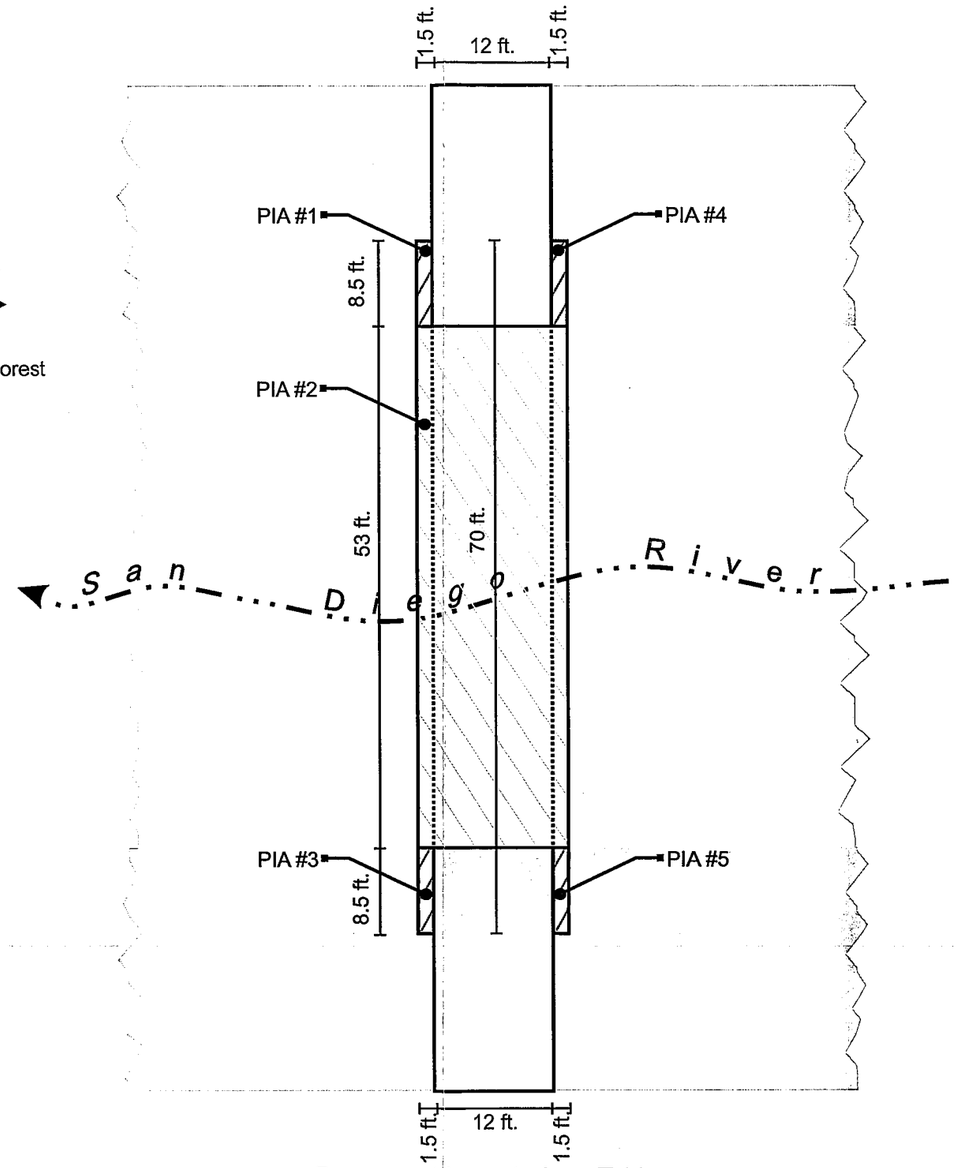
Temporary (construction) Impact Areas (TIA)



LEGEND

- Southern Cottonwood-Willow Riparian Forest
- Waters of the U.S.
- Impacts to SCWRF
- Impacts to Waters of the U.S.
- Arizona Crossing

Permanent (operation) Impact Areas (PIA)



Temporary Impact Area Table

Impact Area	Habitat	Sq. Ft.	Acres
TIA #1	SCWRF	446.5	0.0103
TIA #2	Water of the U.S.	2650.0	0.0608
TIA #3	SCWRF	446.5	0.0103
TIA #4	SCWRF	446.5	0.0103
TIA #5	SCWRF	446.5	0.0103

	Total SCWRF	**1786.0**	**0.0410**
	Minus 0.0012 acre Permanent impacts		**0.0398**
	Total Water of the U.S.	**2650.0**	**0.0608**
	Minus 0.0183 acre Permanent impacts		**0.0425**

Permanent Impacts Area Table

Impact Area	Habitat	Sq. Ft.	Acres
PIA #1	SCWRF	12.75	0.0003
PIA #2	Water of the U.S.	795.00	0.0183
PIA #3	SCWRF	12.75	0.0003
PIA #4	SCWRF	12.75	0.0003
PIA #5	SCWRF	12.75	0.0003

	Total SCWRF	**51.0**	**0.0012**
	Total Water of the U.S.	**795.0**	**0.0183**

Figure 7
Schematic Representation of Arizona Crossing Impacts

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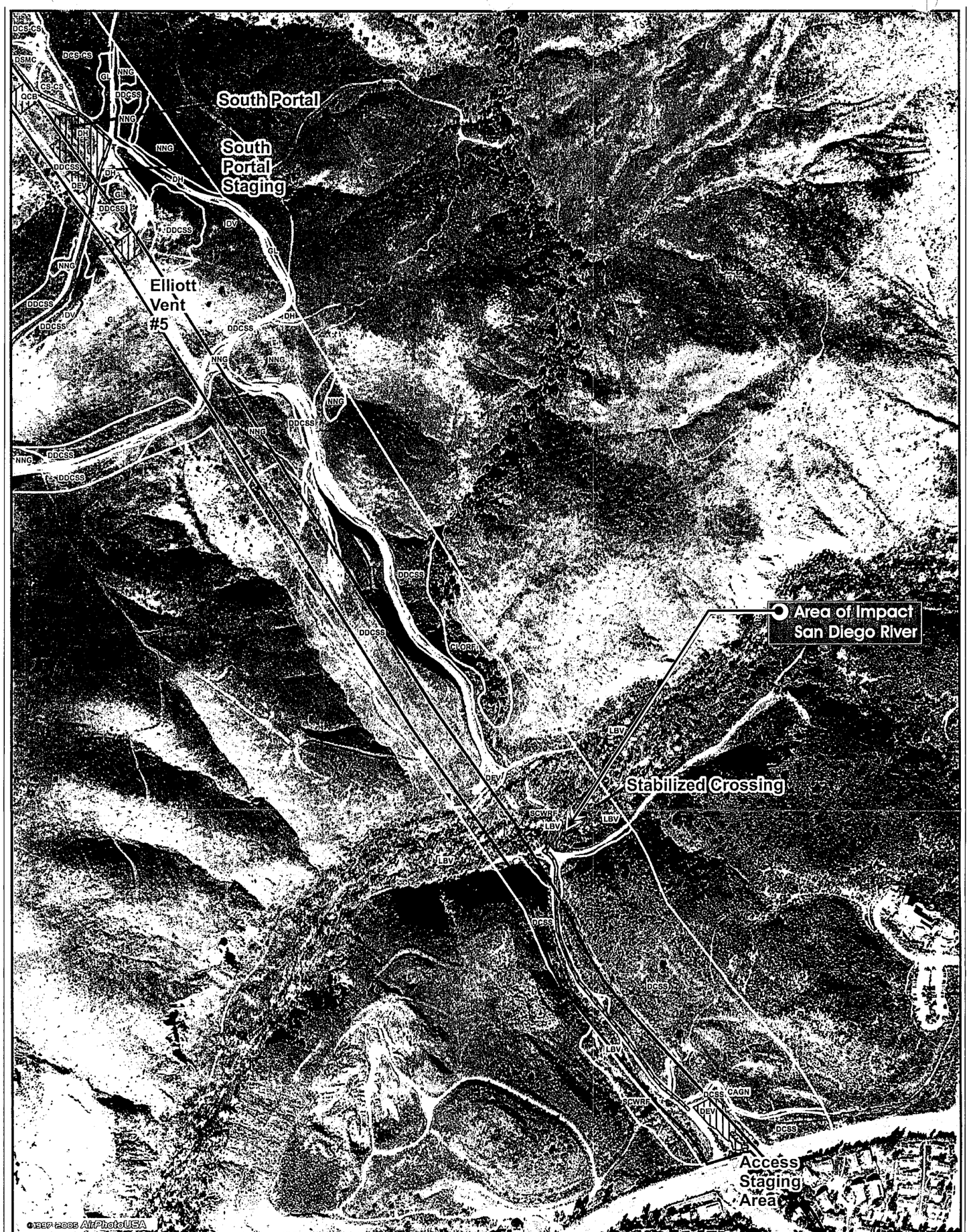

Figure 8c
Wetland Impacts Map

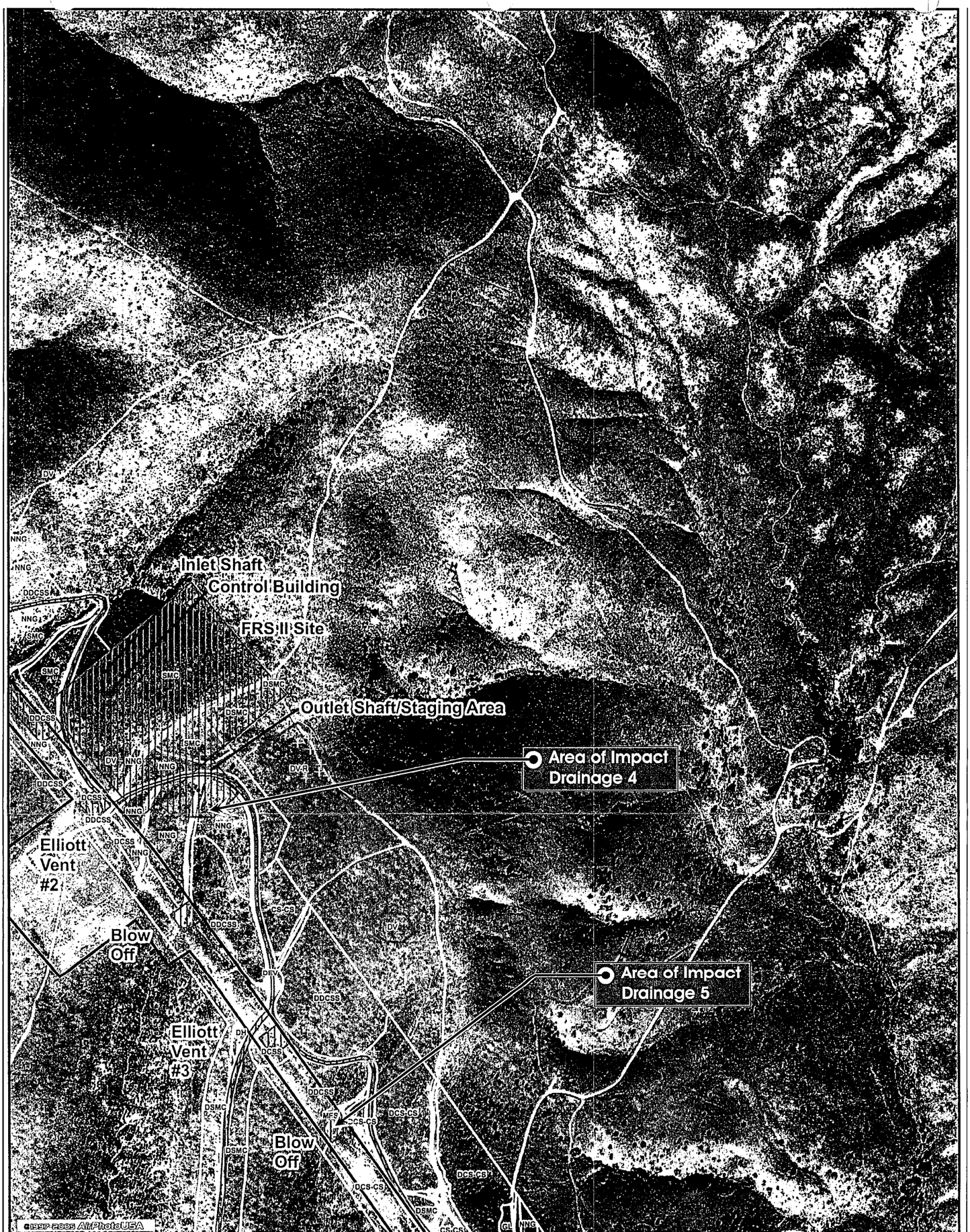

Figure 8b
Wetland Impacts Map

Figure 8a
Wetland Impacts Map

ATTACHMENT 5

MITIGATION MAPS

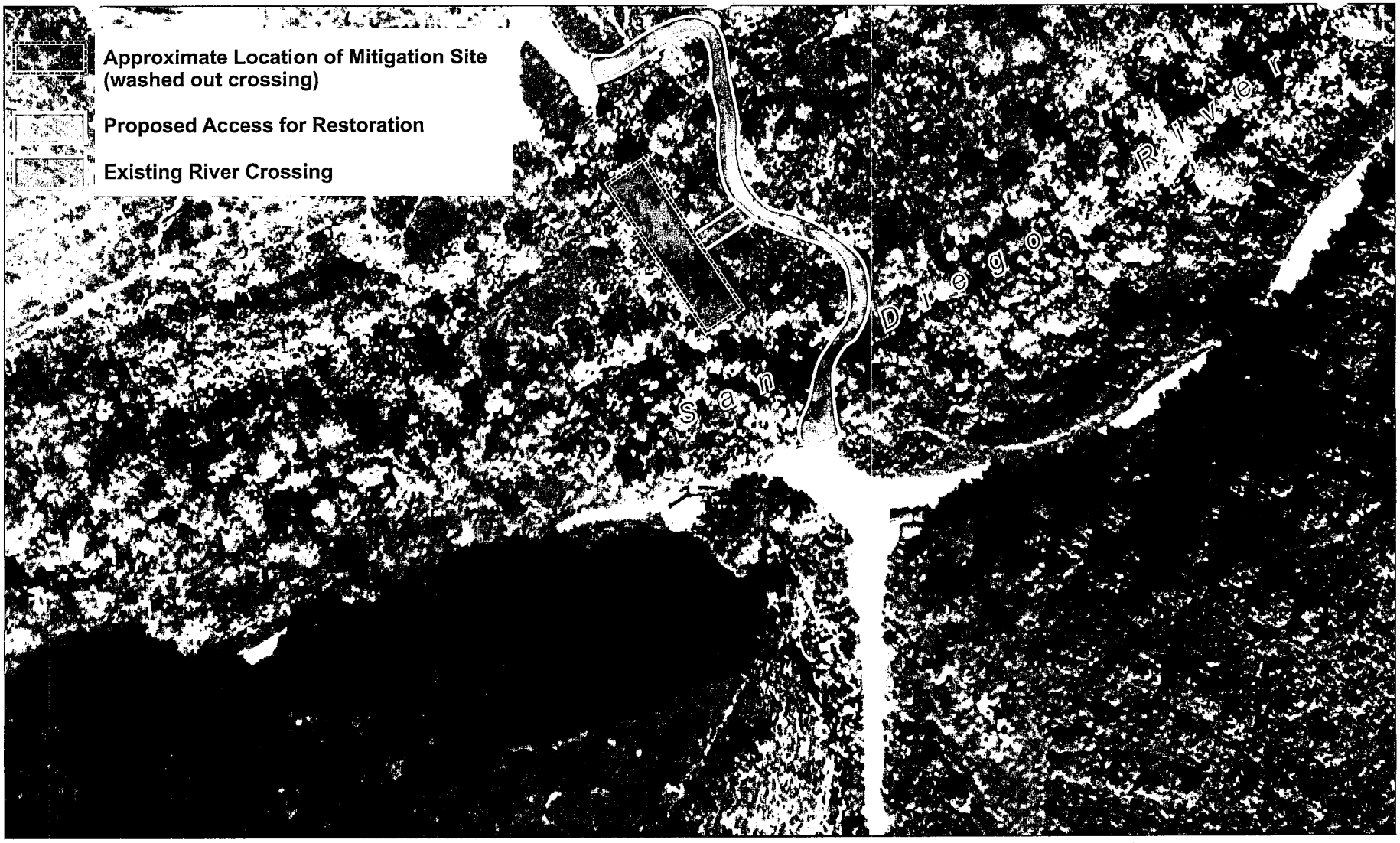

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Figure 9
Mitigation Area

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ENVIRONMENTAL SERVICES

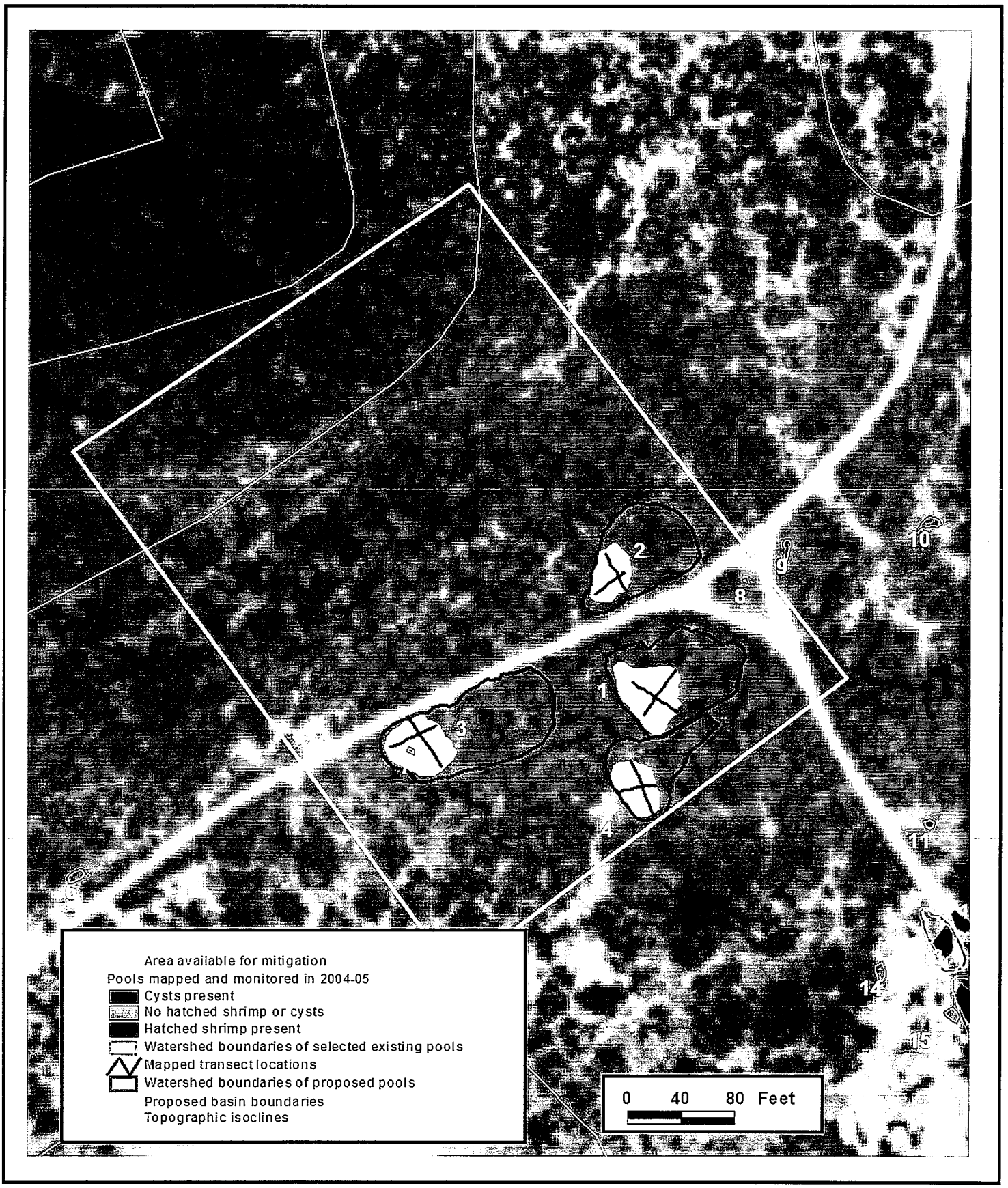

Figure 6 - Locations of proposed constructed and enhanced pools, with proposed watershed areas.

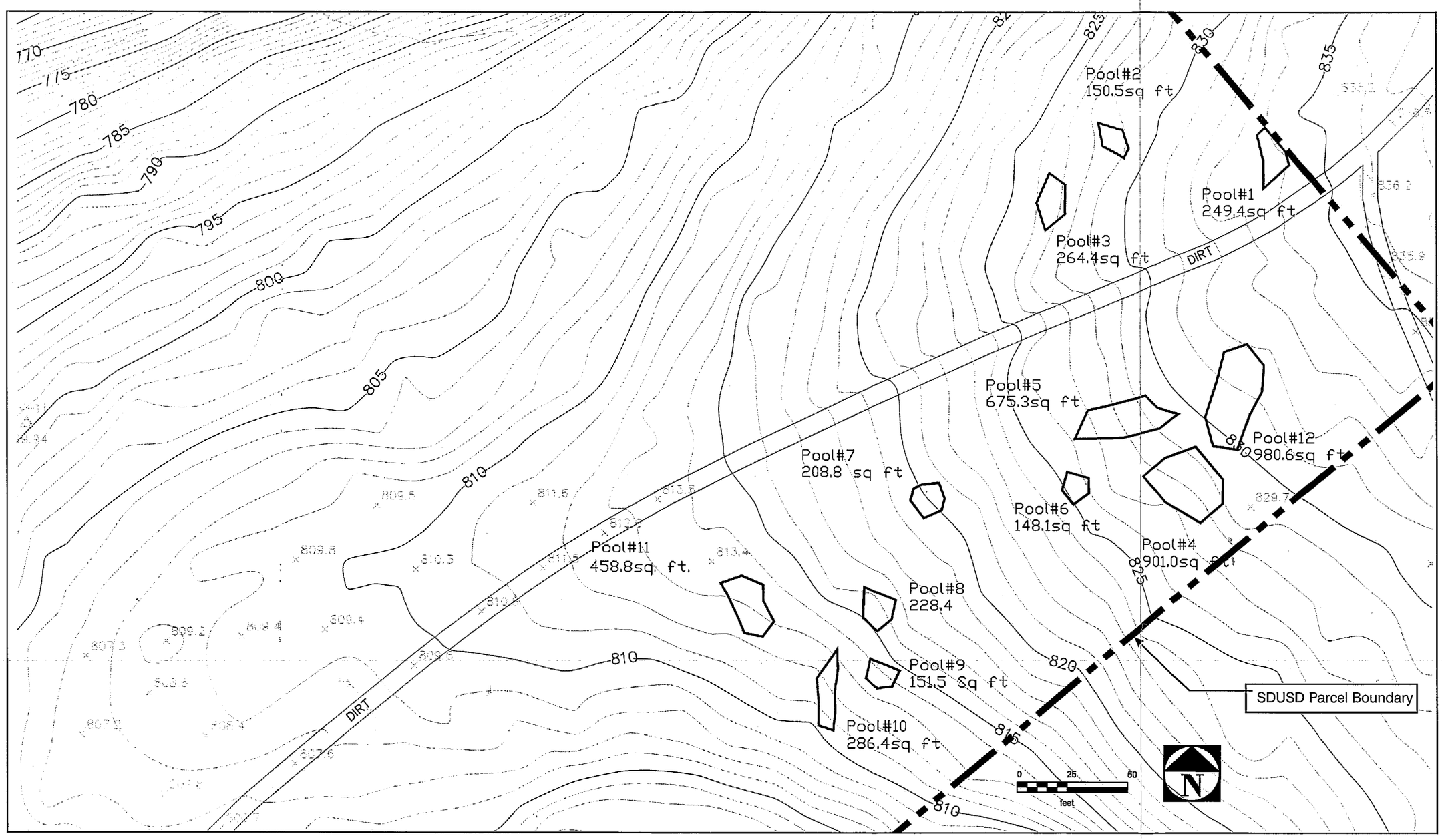

Figure 7
Locations and Areas of Proposed Vernal Pool Creation

ATTACHMENT 6

STREAM PHOTO DOCUMENTATION PROCEDURE

Standard Operating Procedure (SOP) 4.2.1.4

Stream Photo Documentation Procedure

(CARCD 2001, Written by TAC Visual Assessments work group)

Introduction:

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

Equipment:

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

Required:

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

Optional:

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

How to Access Aerial Photographs:

Aerial Photos can be obtained from the following federal agencies:

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

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

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

Roles and Duties of Team:

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

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

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

Safety Concerns:

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

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

- Inclement weather
- Flood conditions, fast flowing water, or very cold water

- Poisonous plants (e.g.: poison oak)
- Dangerous insects and animals (e.g.: bees, rattlesnakes, range animals such as cattle, etc.)
- Harmful or hazardous trash (e.g.: broken glass, hypodermic needles, human feces)

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

General Instructions:

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

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

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

Recording Information:

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

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

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

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

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

The Photo Point: Establishing Position of Photographer:

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

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

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

Determining the Compass Bearing:

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

Suggestions for Photo Points by Type of Project:

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

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

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

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

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

All Restoration and Fuel Reduction Projects – Time Series:

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

Meadow Restoration:

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

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

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

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

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

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

Stream Restoration/stabilization:

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

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

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

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

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

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

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

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

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

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

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

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

Stream Sediment Load or Erosion Monitoring:

1. Long views from bridge or other elevated position.

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

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

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

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

PHOTO- LOG FORM

Project:
Location:
Date:
Photographer:
Team members:

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

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

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

Location:

Subject Description:

Date:

Time: