

**Flood Control, Habitat, Restoration and Recharge on
the San Diego River**

**Co-Sponsored
by the**

San Diego River Park – Lakeside Conservancy

and

Riverview Water District

Flood Protection Corridor Program

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TABLE OF CONTENTS

Section I: Executive Summary Table	1
Section II: General Information	4
History of the Area		
- San Diego River Revitalization Efforts		
- Background on the Applicants		
Description of the Project		
- Statement of the Problem Being Addressed		
Basic Project Description		
- Property Acquisition and Partnerships with other Agencies		
Section III: Minimum Qualifications Checklist	.....	16
Section IV: Flood Protection Benefits	.....	16
- Existing and Potential Urban Development in the Floodplain		
- Flood Damage Reduction Benefits of the Project		
- Restoration of the Natural Processes		
- Project Effect on the Local Community.		
Section A: Wildlife Benefits	.....	31
- Importance of the Site to the Regional Ecology		
- Diversity of Species and Habitat Types		
- Ecological Importance of Species and Habitat Types		
- Public Benefits Accrued from the Expected Habitat Improvements		
- Viability/Sustainability of Habitat Improvements		
Section B: Agricultural Land and Conservation Benefits	.....	45
This section does not apply and is not included in this grant proposal.		

Section VI: Miscellaneous Benefits and Quality of the Proposal	.....	47
- Size of the Request, Other Contributions		
- Number of Persons Benefiting, etc.		
- Quality of Effects on the Water Supply or Water Quality		
- Quality of Impacts on Under Represented Populations or Historic or Cultural Resources		
- Technical and Fiscal Capability of the Project Team		
- Coordination and Cooperation with Other Projects, Partner Agencies, etc.		

LIST OF TABLES

Table 1: Project Studies	.....	13
Table 2: Land Acquisition Cost and Funding	.....	14
Table 3: Property Acquisition	.....	15
Table 4: Implementation of Restoration	.....	15
Table 5: Actions to Minimize Impacts to Adjacent Property Owners	.....	24
Table 6: Value of Improvements Protected	.....	30
Table 7: Number of People Expected to Benefit	.....	47
Table 8: Riverview Water District Benefits Scenarios	.....	49
Table 9: Letters of Support	.....	57

LIST OF FIGURES

Figure 1: List of Property Owners	.....	15/16
Figure 2: Wetlands Conceptual Plan Options	25/26
Figure 3: Sensitive Biological Resources	37/38

BIBLIOGRAPHY	58
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I. Executive Summary Table

Project Priority Criteria		
Benefit	Included in Plan	Comments
Flood Protection Benefits		
Existing and potential urban development in floodplain	✓	1) A variety of industrial and numerous residential subdivisions, Lakeside Farms Elementary School, Willowbrook Golf Course, and a chicken ranch.
Improvement expected by completing the project	✓	1) Slow transient and flood flows through expansion of “flood plain” area 2) Water quality improvement through natural treatment in both surface and subsurface flows 3) Reduce sediment transport 4) Reduce need for down stream stabilization structures 5) Facilitate recharge in the Santee/El Monte aquifer and increase the amount and quality of recharge available to the Riverview Water District 6) Restoration of wildlife habitat for threatened and endangered species
Quality of restoration of natural processes	✓	The restoration of the degraded floodplain and enhancement of existing watershed functions will increase the quality of natural processes within the floodplain to pre-disturbance levels
Quality of effects on local community	✓	1) Reduced flooding both upstream and downstream, increasing quality of life and possibly reducing flood insurance premiums 2) Aesthetic scenic values improved from low quality to high quality 3) High quality educational value through creation of nature trail and habitat area for threatened and endangered species
Value of improvements protected	✓	The project will help protect approximately \$51 million in nearby improvements
Wildlife Conservation Benefits		
Importance of the site to regional ecology	✓	1) The project area is a wildlife corridor that provides refuge and ease of movement to wildlife for access to food and water sources during drought, escape routes from brush fires, and dispersal of genetic traits between population centers 2) Home to many threatened and endangered species 3) River discharges into the ocean downstream

Project Priority Criteria		
Benefit	Included in Plan	Comments
Diversity of species and habitat types	✓	<p>1) Currently, the project site does not support the complete and diverse assemblage of the species commonly found in these habitats due to previous disturbances. The entire project site is characterized by low species diversity and dominance of non-native and ruderal species.</p> <p>2) Four habitat types are present in the area:</p> <ul style="list-style-type: none"> • Ruderal non-native grasslands and recently disturbed areas • Riparian habitats • Agricultural areas • Coastal sage scrub <p>3) Six riparian habitat types are present in the area:</p> <ul style="list-style-type: none"> • Open water • Emergent riparian • Riparian woodland • Riparian scrub • Disturbed riparian • Wet meadow <p>4) 75 bird species 5) Approximately 15 or more mammal species 6) 1 amphibian species 7) 7 reptile species</p>
Ecological importance of species and habitat types	✓	<p>1) The region has historically supported 52 sensitive animal species, 16 sensitive plant species and 3 sensitive habitat species</p> <p>2) All sensitive bird species, 5 sensitive mammal species and 5 sensitive reptile species are potential inhabitants of the project site</p> <p>3) All 3 sensitive habitat type have been observed in the project site</p> <p>3) Examples of endangered species that occur or have a high probability of occurring on the project site include:</p> <ul style="list-style-type: none"> • Southwestern Willow Flycatcher • Willow Flycatcher • Least Bell's Vireo • Pacific Pocket Mouse
Quality of expected habitat improvements	✓	The project will restore the high quality natural riparian habitat conditions that are required to increase the low species diversity back to normal levels.
Viability/sustainability of habitat improvements	✓	Since the habitat improvements will be sustained through the river's natural flows, the habitats will be self-sustaining once the project is completed.
Miscellaneous Benefits and Quality of Proposal		
Size of request, other contributions, number of persons benefiting, cost of grant per benefited person	✓	<p>1) \$2 million for acquisition of approximately 125 acres</p> <p>2) \$2 million for the restoration of 120 acres</p> <p>3) 696,700 people will benefit</p>

Project Priority Criteria		
Benefit	Included in Plan	Comments
Quality of effects on water supply or water quality	✓	1) Natural wetland treatment of water is known for its ability to filter out contaminants and improve water quality dramatically 2) The widening of the channel will both increase the amount of ground covered in water and slow the flow of water off site, increasing recharge of local aquifers
Quality of impact on underrepresented populations or historic or cultural resources	✓	1) Residents of the Slum and Blight Area. 2) No historic or cultural resources are believed to be present within the project area, eliminating the possibility of any adverse impacts from the project
Avoidance of adverse effects on local government tax base	✓	Project in conjunction with river park efforts will be a net benefit to the tax base.
Technical and fiscal capability of the project team	✓	1) Experienced hydrologic consulting firm, managed by a Professional Wetland Scientist 2) Technical Advisory Team with broad capabilities

Flood Protection Corridor Program
Project Evaluation Criteria
And Competitive Grant Application Form

II. General Information

Project Name: **Flood Control, Habitat, Restoration and Recharge on the San Diego River**
Project Location: **Lakeside** County: **San Diego** (See Appendix A-1 for regional map)

WATERBODY/WATERSHED: **18070304**
GPS COORDINATES: **N 32° 51'22 W 116° 56'24**
Name and address of sponsoring agency or non-profit organization:

Sponsor: (Non-profit) **San Diego River Park – Lakeside Conservancy**
11769 Waterhill Road, Lakeside, CA 92040
Project Leader: **Michael Beck** Project Manager (contact): **Robin Rierdan**
Phone Number: **(619) 443-4770** E-mail Address: **r2rierdan@cox.net**

Project Manager Date

Sponsor: (Public Agency) **Riverview Water District**
11769 Waterhill Road, Lakeside, CA 92040
Project Manager: **Jeanne Swaringen**
Phone Number: **(619) 561-1333** E-mail Address: **jsrwd@earthlink.net**

General Manager Date

Fiscal Agent for Project Implementation: **San Diego River Park Foundation**
4891 Pacific Highway, #114 San Diego, CA 92110
Project Contact: **Jo Ann Anderson**
Phone Number: **(619)297-7380** E-mail Address: **anderson@sandiegoriver.org**

Executive Director Date

Project Broker for Land Acquisition: **The Conservation Fund**
1823 11th St. #1B, Sacramento, CA 92514
Phone Number: **(510) 208-2780** E-mail Address: **nans@aol.com**
Project Contact: **Nancy Schaefer**

Grant Request Amount: **\$4,139,040**

A. History of the Area

The San Diego River in Lakeside has been sand mined for nearly 100 years. For much of its recorded history, it has periodically experienced catastrophic flooding during the winter months. Although the river remained ‘dry’ through much of the summer months, high water tables and through flows allowed for significant dry land agriculture during the early part of the last century and in the 1900’s. The river was dammed to form El Capitan Reservoir in 1935 and then again on the north fork at San Vicente Creek in 1944 for the purposes of flood protection and water supply. These dams drastically reduced through flows and the viability of agriculture and dramatically contributed to loss of habitat, degraded water quality, and loss of recharge to the Santee/El Monte aquifer, which underlies Lakeside. During the intervening years, development contributed to increased urban runoff and storm water flows.

In 1978 and 1980 the area experienced more catastrophic flooding. Flood levels reached 3010 csf and 3420 csf respectively. The Upper San Diego River Improvement District (USDRID), a redevelopment district, was formed as a response, and a plan for the channelization of the river developed. The plan established a river floodway and was adopted by the County of San Diego. That plan allowed for sand mining of the flood plain, and called for the reclamation of the land with fill to raise it out of the floodway. After certification as flood free and flood safe, the land was designated for industrial purposes. Community members have long advocated for the creation of a river park. The community expressed grave reservation regarding the unsightly nature of industrial uses and potential contamination to the groundwater from industrial spills and the need for more recreation opportunities in Lakeside. In 2000, the RiverWay Specific Plan was approved. That plan allows for both park and industrial uses.

In the middle of 1999, MTBE contamination was detected in the Riverview Water District wells and the well field was shut down. The Riverview Water District sued the gas stations responsible for the contamination and won. The proceeds from the suit are being used to construct a

treatment facility to remove the MTBE from the water. Even with the success of that facility, the water pumped from these wells will still be high in nitrates and TDS and will still require blending.

In October of 2002, the State Water Resources Control Board awarded the Riverview Water District, a \$1.3 million grant for the creation of a palustrine treatment wetland on a section of the Cal-Mat property nearest to the Riverview Water District wells. The goal of this grant is to create a 4 cell gravity fed wetland that would treat surface water for nitrates and then use a rapid infiltration basin to recharge that water into the Riverview Water District well fields to increase the water quality in their wells.

B. Background on San Diego River Revitalization Efforts

Recently, the San Diego River has re-emerged as an important habitat, and both water and recreational resource within the greater San Diego region. Governor Davis signed AB 2156 (Kehoe), to create the San Diego River Park State Chartered Conservancy. The bill established the 8th state chartered conservancy in California. It will develop a master plan for the San Diego River Park and provide funding for river park projects.

The City of Santee, which borders the San Diego River Park – Lakeside Conservancy (Lakeside Conservancy) planning area, is working on its own river park planning process, as is the City of San Diego. Connecting the river to the communities with trails, improving water quality, flood control, habitat, and recreation opportunities are the goals that unify the San Diego River Park planning process.

C. Background on the Applicants (See Appendix B)

San Diego River Park – Lakeside Conservancy

The San Diego River Park –Lakeside Conservancy was founded in 2001 with the goal of creating a river park for the community of Lakeside and East San Diego County. The planning

area for the Conservancy falls within the boundaries of the Upper San Diego River Improvement Project, which is a 592¹-acre redevelopment area designated by San Diego County.

The north side of the river is planned for ‘human’ uses, while the proposed project on the south side is planned for natural functions. Hanson Aggregates, Inc. has committed twenty-five acres of property on the north side of the river to the Lakeside Conservancy, once its on-site operations are completed in 5 to 7 years. The property will be the home of the Nature and Cultural Center. The Center will be designed by internationally famous artist James Hubbell and will be the only museum in San Diego to focus exclusively on the natural and cultural history of the San Diego River, ‘California’s First River.’

The side of the river between Channel Road and Riverford Road is to be dedicated to nature and natural processes. Eighty percent of all land on the south side of the river is part of the Cal-Mat property. The Lakeside Land Co. owns another 10%. This grant application addresses acquisition, flood control, and restoration on both Cal-Mat and Lakeside Land Co. properties. (See Appendix A-2)

Riverview Water District

Riverview Water District was formed in 1916 as the Riverview Farms Mutual Water District. In 1954 Riverview Water District became a local Public Agency and the District began to purchase water from the Metropolitan Water District via the Padre Dam Municipal Water District. The District provides quality water to its customers through a system of transmission and distribution lines that have been expanded and kept up to date to provide service to a rapidly growing area.

The district encompasses 2,000+ acres and approximately 2,150 meters. It provides service to three elevation levels with storage in four reservoirs. The Emerald Grove Reservoir was the first

¹ Cal-Mat Lakeside Final Reclamation Plan, New Horizons Planning Consultants, Inc. November 2002 pg 7

completed, soon to be followed by the Gay Rio Reservoir, Walnut Reservoir and most recently the Sky Rim Reservoir.

The Riverview Water District has 7 employees and projected revenues of \$2,156,000 for fiscal year 2002-2003.

D. Description of the Project

A Statement of the Problem Being Addressed

In 1978 and 1980, the San Diego River in the unincorporated community of Lakeside experienced catastrophic flooding. The flood destroyed roads, bridges, and pipelines. (See Appendix C) This was not the first time the San Diego River had flooded the community, but it was the first time since the community began its transformation from a rural, farming community to a suburban bedroom community.

The County of San Diego responded with an ambitious plan to reduce flooding by sand mining the alluvium from the river, reclaiming and raising its banks with imported fill, and creating a channelized floodway. Although this process has had some success in reducing flooding during 10 year events, (3500 cfs), it has never been tested in a flood event anywhere near the anticipated 35,000 cfs 100 year flood flows.

A serious flood hazard exists at the eastern end of the proposed project. (See Appendix C-1) There is an existing constriction on the San Diego River that needs to be remedied to allow for 100 year flood flows. Approximately 150 feet west of the Channel Road Bridge, the floodway narrows to approximately 30 feet. This area needs to be widened to 100 feet. Without widening, during a 100-year flood event, flows will either back up and inundate the Channel Road Bridge or this point will wash out and cause major siltation and property damage down stream.²

Finally, many of the natural functions of the river including habitat, water quality, and recharge have been lost in the process of channelizing portions of the river. The river has also lost its place as a source of recreation in the community.

Project Description

This project is one of the last opportunities of this magnitude to encompass non-structural flood control and restoration along the entire urban length of the San Diego River. It will set the standard for smaller restoration projects along the urban portion of the river. The project will attenuate future floods by expanding the flood channel into part of the historic flood plain, slowing flows, and allowing for sediment and nutrient transport to support habitat for threatened and endangered species.

Studies with the appropriate level of detail have yet to be completed because of the scale, scope, and the multifaceted benefits anticipated from this project. These studies will drive the analysis of problems and opportunities, the formulation of criteria and plans, and the specific restoration, enhancement and wetland and habitat creation measures employed.

This will be a ‘turnkey’ project. Turnkey projects are more efficient, more cost effective, and have immediate benefits to the riparian and aquatic ecosystem. In general, projects which enhance and restore historic floodplain, if they are still hydrologically connected in the watershed, deliver immediate benefits. Projects in created wetlands may take up to 10-20 years to achieve the same watershed function. Benefits from this project will be immediate because the proposed project is a large and continuous unit within the historic floodplain, and still very much connected to the watershed.

² Doug Isbell, Department of Public Works, San Diego County

Preliminary feasibility analysis has been completed. The land is in an existing flood way and still connected to the hydrology and watershed with the rudiments of emergent habitat on site. Numerous flood flow studies have been completed facilitating the design and analysis of the project. Hazardous waste issues have been investigated and remediation is underway. The owners of the property are willing sellers. The project accomplishes true restoration through enhancement of the degraded flood plain and the creation of additional riverine habitat.

The project proposes to use monies granted from the Flood Protection Corridor Program to:

- Assist in the acquisition of 125 acres, approximately 50% of which are in the flood way and the remaining portion has been raised and channeled, and now is padded out as industrially zoned land.
- Remove the constriction at the eastern end of the proposed project to widen and turn the flows slightly south into the site.
- Remove the fill; widen the river into a portion of its historic flood plain.
- Construct a bankful channel, which replicates, to the farthest extent possible, the natural meanders of a dynamic Southern California River System.
- Restore a variety of riverine and riparian habitat types for several threatened and endangered species.
- Redesign the Los Coches Creek discharge point, through the use of passive engineering technique, to slow flood velocities and divert those flows into the newly created meander system.

The impact of the project will be to:

- Remove the constriction in the floodway and allow for 100 -year flood flows.
- Lessen the impact of flooding on the San Diego County Water Authority pipeline which bisects the property and is buried six feet below floodway, and on several downstream structures

including the bridge at Riverford Road and the Lakeside Sanitation District's trunk line crossing slightly downstream from the Riverford Bridge.

- Lessen the need for several drop structures, planned for this stretch of the river but not yet constructed.³
- Capture transient flood flows for habitat and recharge. Increase the amount of recharge and the quality of recharge to the Santee/El Monte aquifer, which serves the Riverview Water District's municipal wells located on the site, through use of natural processes associated with habitat. (See Appendix A-3)
- Provide extra flood capacity as the Lakeside area grows increasingly urbanized which will increase the 'flashiness' of flood and flow events.

The project will consider as part of the planning and implementation process information developed in a comprehensive set of studies. (See Table 1)

³ County of San Diego, Adopted San Diego River Plan 1992

Table 1: Project Studies (Please see Appendix D for Initial Study and Existing EIR)

CEQA	Engineering Analysis	Aquatic-Ecosystem Restoration
<p>Areas identified in the initial study as needing further analysis and possible mitigation</p> <hr/> <p>Vegetation and Wildlife Fisheries Water Quality Air Quality Noise Cultural Resources Public Utilities Water Resources Visual Resources Aesthetics</p>	<p>Topography Hazardous Substance Review Geology and Soils Geomorphology</p> <ul style="list-style-type: none"> • Historic Setting • Anthropogenic Impacts • Current Conditions • Expected Future Conditions, <p>Hydraulics and Sediment Transport 1.) Hydraulic Model Development 2.) Reach-Average Hydraulics 3.) Bed Material Sediment Transport – Project Reach and Upstream Supply Water Balance Climate Analysis Review of Existing Water Quality Data</p>	<p><u>Related Studies and Reports</u></p> <ul style="list-style-type: none"> • Habitat Evaluation Procedure (HEP) • Baseline Geomorphic, Hydraulic and Biological Studies • Subsurface Soils Investigation <p><u>Existing Conditions</u></p> <ul style="list-style-type: none"> • Habitat Loss and Degradation • Mapping of Exotic Species • Changes in Structure, Function and • Dynamic Processes of the River <p><u>Restoration Opportunities</u></p> <ul style="list-style-type: none"> • Availability of Water for Wetland and Riparian Habitat Creation • Feasibility of Wetland Types to Support Threatened and Endangered Species • Creation, Restoration, and Conservation in Perpetuity to Benefit Wildlife Including Threatened and Endangered Species • Benefits to Migratory Birds • Cumulative Benefits to Other State and Local Conservation Initiatives

(iv) Property Acquisition and Partnerships with Other Agencies

The San Diego River Park – Lakeside Conservancy has entered into negotiations for the purchase of the 104 acres currently owned by Cal-Mat property and another 5.3-acre⁴ parcel on its southern border owned by Lakeside Land Co. (See Appendix E) Several agencies are committed to funding the acquisition. (See Table 2) The Wildlife Conservation Board has committed \$3 million. The State Coastal Conservancy has committed \$800,000 and approximately \$4.2 million will be received from Prop 40 funds, via the Coastal Conservancy as well. These sources of money will provide approximately 75% of the funds needed toward the

⁴ Lakeside Land Co. is in the process of a lot split/lot line adjustment of other contiguous parcels. Their goal is to split off all of their land located in the river floodway. They have indicated they will either donate the land to the Lakeside Conservancy or sell it for a nominal price. (See their ‘willing seller’ letter)

purchase price. The remaining amount is being solicited from the FPCP as part of this grant application. (See Table 2)

The project also combines a previous grant from the State Water Resources Control Board for \$1.29 million. This grant from the Small Communities program of Prop 13 is designed to create a palustrine treatment wetland to benefit the Riverview Water District.

Table 2: Land Acquisition Cost and Funding (See Appendix F for funding commitments)

Cal-Mat Acquisition	Total Cost: \$9 million	Lakeside Land Co. Acquisition	Total Cost: \$1.1 million	Total Acquisition Cost
Funding Source	Amount	Funding Source	Amount	
State Coastal Conservancy	\$800,000			
Wildlife Conservation Board	\$3 million			
Prop 40 via State Coastal Conservancy	\$4.2 million			
FPCG Program	\$1 million	FPCG Program	\$1.1 million	
Total Funds	\$9 million		\$1.1 million	\$10.1 million

*Lakeside Land is working on a lot split that would create two lots from three. (See Appendix A-4)

Table 3: Property Acquisition (See Appendix A-2 for aerial photo and Appendix F for letters from willing sellers)

Cal-Mat Property		Lakeside Land Co.	
APN	Acreage	APN	Acreage
382-250-30	79.56	382-260-09	5.33
394-011-35	20.66	382-260-08	11.88
382-250-31**	1.25	382-011-03#	7.55
382-250-32**	-	383-011-04#	5.05
382-250-10**	.66	382-011-05#	2.5
		382-001-06#	2.5
		379-192-15#	2.5
Total Acres	102	Total Acres (after the lot line adjustments)	23

** Latter three parcels are narrow subdivided easements: Palm Row extension, Riverview Water District and frontage parallel to Highway 67.

Lakeside Land Co. has requested a lot line adjustment, so that a portion of these lots will become part of the Lakeside Land Co. portion of the project.

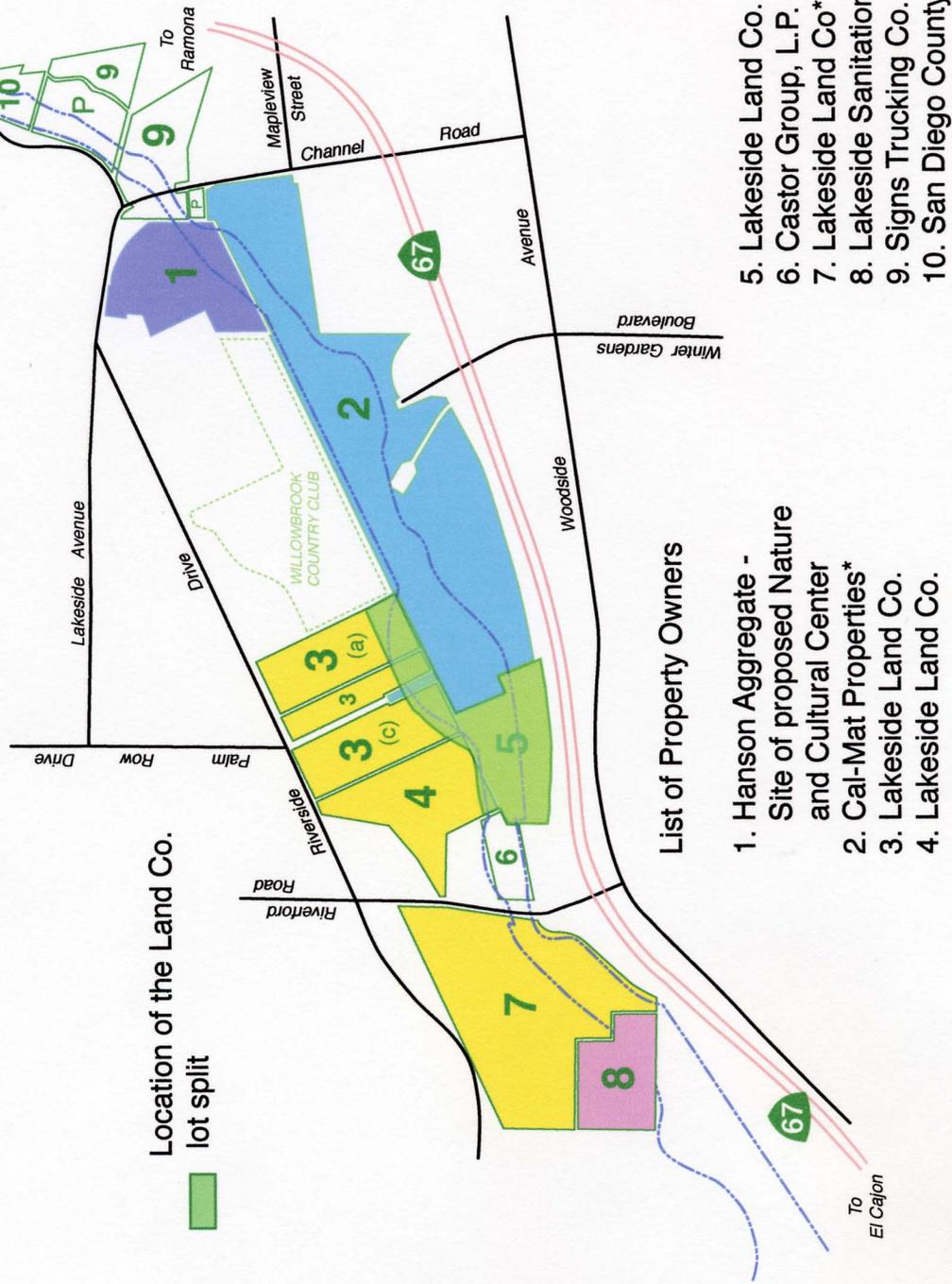
Table 4: Implementation of the Restoration

Source of Funds	Acreage	Amount of Funds	Activity
Small Communities Program, Prop 13 SWRCB	5 Acres	\$1.29 million	Create a palustrine wetland for water treatment and recharge: Studies, plans, specifications, implementation
Flood Protection Corridor Program	120 acres	\$2.1 to \$6.5 ⁵ million	Creation of enhanced flood protection corridor, to include habitat, and recharge

(Please see Figure 1 for a complete list of property owners within the Lakeside Conservancy’s project area.)

⁵ The range in this value is due to the cost of excavation. The San Diego River Park – Lakeside Conservancy is currently in negotiations with the City of Santee and a developer, Vestar Inc. The goal is to have them remove the fill at no cost for a project in Santee. If we are successful, the implementation costs will be approximately \$2.1 million. If we are not, a reasonable cost for excavation is \$4.3 million. We feel confident that we can negotiate a no cost arrangement with Vestar.

Figure 1: List of Property Owners within the Lakeside Conservancy's Project Area



Location of the Land Co.
 lot split

List of Property Owners

1. Hanson Aggregate - Site of proposed Nature and Cultural Center*
2. Cal-Mat Properties*
3. Lakeside Land Co.
4. Lakeside Land Co.
5. Lakeside Land Co.
6. Castor Group, L.P.
7. Lakeside Land Co.*
8. Lakeside Sanitation District
9. Signs Trucking Co.
10. San Diego County

*Target properties for acquisition

III. Minimum Qualifications Checklist

Minimum Qualifications

Minimum Qualifications	Proposed Project	Met
A. Protect, create, and enhance flood protection corridor	Project will widen corridor, to capture slow and transient flows, create habitat for threatened and endangered species, and facilitate recharge.	✓
B. Local public agency, non profit or joint venture	This is a joint venture of the San Diego River Park – Lakeside Conservancy (non-profit) and the Riverview Water District (public agency)	✓
C. Use California or Community Conservation Corps.	Project will use the San Diego Urban Corps.	✓
D. Consider all practical alternatives to fee interest acquisition	See letter from seller	✓
E. Willing Seller	See letter from seller	✓
F. Plan to minimize impacts to adjacent land owners, and maintenance plan	See Table 5	✓
G. Project located in a FEMA or SFHA area	Located in the Special Flood Hazard Area Inundation by 100 year flood (See Appendix A-6)	✓

V. (340 points) Flood Protection Benefits

A. Existing and potential urban development in the floodplain (50)

1.) Describe the existing and potential urban development at the site and the nature of the flood risk.

3.) Discuss the importance of improving the flood protection at this location. Include the number of people and structures that are affected by the flood hazard, and the flood impacts to highways and roads, railroads, airports and other infrastructure, and agriculture.

Question 1 and 3 are combined as they generally speak to the same issue.

Population

Approximately 31,000 people live within 1.5 miles of the project site. (2000 census) The area is the most densely populated area of the community and the most flood prone. Most of the community's major infrastructure is found within the redevelopment area, the overlapping 'slum

and blight' area, and the nearby areas, all of which lay in the historic flood plain. (See Appendix A-5 for neighborhood attributes)

Transportation

Two primary roads provide major transportation access to the area: Riverford Road at the western end of the project area and Channel Road at the eastern end of the project area. Riverford Road, classified as a Prime Arterial, carries approximately 14,200 vehicle trips per day. Channel Road, classified as a major road, carries 11,800 vehicle trips per day. Currently, several major public works projects are planned for the area. Caltrans is planning to expand the bridge crossing the San Diego River at Riverford Rd. to accommodate anticipated growth in the area. The expansion of the bridge at Riverford Road is planned to include a stabilization structure. The ramps on Riverford Rd. to State Route 67 are also going to be redesigned to facilitate the flow of traffic onto the freeway.

In the eastern portion of the redevelopment area, Caltrans is planning to redesign and expand the SR 67 bridge that crosses the river. The projects are anticipated to cost \$9 million. The area around the proposed project is the most heavily urbanized section of Lakeside within the valley of the San Diego River. Several new subdivisions are planned in the area just outside the floodway (See Figure 1: Outline of Parcels)

Water and Sewer

The Riverview Water District's municipal wells are located on the Cal-Mat property through an easement. These wells pump approximately 400 gallons per minute and supply 40% percent of the district's historic water needs. The district serves approximately 10,000 people.

The San Diego Water Authority pipeline bisects the Cal-Mat Property. That line carries water from storage in San Vicente Reservoir to parts of central and south San Diego. It serves approximately 204,000 people.

There are two major sewer lines crossing the San Diego River. One at Channel Road is attached to the bridge and is not fully operational at the moment. Currently it serves the Navy housing facility. It is anticipated that it will serve several planned developments over the next few years as well as industrial property located in Moreno Valley.

The second line, just west of Riverford Road, is a major trunk line serving Lakeside and the community of Alpine. Between the two communities, the line services nearly 15,000 equivalent dwelling units (edu's) or approximately 37,500 people.⁶

Community Facilities

The County of San Diego is planning to construct a state of the art baseball facility at the west-end of the redevelopment area on the site of the old Lakeside Sanitation District facility. The County anticipates this facility will cost nearly \$5 million to construct.⁷ Hillside Meadows, a large subdivision with 97 homes is planned for the open space area at the northwestern end of the redevelopment area.

2.) How often has flooding occurred historically?

The earliest records of major floods along the San Diego River are in 1825 when high water changed the course of the river. The greatest flood ever reported in the basin occurred in 1862 and the second greatest in 1916. A discharge of 70,200 cubic feet per second (cfs) was estimated at the gauging station on the river near Santee during the 1916 flood, before El Capitan and San Vicente Dams were built.

Extensive flooding during the winters of 1978 and 1980, and the resultant damages, stressed the need for flood control measures in the Lakeside/ Santee area. A 1980 report by the County (3)

⁶ George Ream, Department of Public Works, San Diego County Sanitation District, San Diego County

⁷ Chimene Adams, Policy Advisor on Parks and Recreation to Supervisor Dianne Jacob, San Diego County

documented 50- to 100-year flooding in the area, with associated damage to homes as well as commercial and public facilities. Within the San Diego River floodplain, stabilized levees beneath the Highway 67 Bridge were eroded; a 20-foot diameter steel culvert at Channel Road was washed out; and the Riverford Road crossing was eroded to a depth of 10 to 20 feet.⁸ (See Appendix C).

B. Flood damage reduction benefits of the project (100)

1. Does the proposed project provide for transitory storage of floodwaters? What is the total community need for transitory storage related to this watercourse and what percentage of the total need does this project satisfy? What is the volume of water and how long is it detained?

2. Describe any structural and non-structural flood damage reduction elements of the project. (Examples of structural elements are levees, weirs, detention/retention basins, rock slope-protection, etc. Examples of non-structural elements are acquisition of property for open space, acquisition of land for flood flow easements, transitory storage, relocation of structures and other flood prone development, elevating flood prone structures, flood proofing structures, etc.)

After the adoption of the River Way Specific Plan in 1990, a flood control plan was adopted in 1992, which established the final configuration of the San Diego River and type, and location of needed flood control structures. This flood control plan would continue to be in effect for the project site, and flood control and land development would be subject to the improvements required by this plan. Presently, two of the three proposed flood control structures under the flood control plan has already been completed, including the Channel Road Bridge project (involving a drop structure and other improvements to Channel Road).

The structures proposed under the adopted flood control plan would be implemented under the proposed project and would act as "check dams" to dissipate the high-energy water flows of major floods. (See Appendix A-6) These structures would also lower the level of the flood water and control the high velocity turbulence at the structures. Water flow between structures would

⁸ San Diego County Flood Control District, Storm Report: February 1980

be controlled with a slow velocity that would prevent significant erosion of the riverbed or banks. This would allow the existing floodway to be reshaped into wetland and upland habitat, with natural, indigenous vegetation along its banks and streambed as an alternative to construction of a concrete channel. Nominal flows up to the two-year storm event will flow in a natural meander pattern and a series of created oxbows will help to achieve wildlife habitat objectives. The meander will increase the river length, therefore decrease the grade and slow velocities. This will further reduce the risk of erosion of the riverbed or banks, and potentially reduce the height of drop structures required. Portions of the riverbed that may be subjected to scour velocities will be protected using geofabric and/or other acceptable methods such as rootwad revetment. Bank, top and toe protection may also be required.

The flood control channel would create a beneficial impact, as it would prevent potential floods from re-occurring along this segment of the San Diego River by increasing the channel capacity to contain a 100-year flood and supply transitory storage in the wetlands and oxbows as discussed above. Special land use designators would be applied to portions of the project site. More specifically, the "W" Flood Control Channel Designator would be applied to areas subject to the 100-year floodplain. This designator restricts development within the 100-year floodplain prior to the construction of flood control structures to prevent any development from becoming subject to a 100-year inundation. This eliminates flood hazards to any development that would be built within the project area; therefore, no significant impacts associated with flooding are anticipated to occur.

The project lies within the mapped dam inundation area for El Capitan and San Vicente reservoirs. The County has an Operational Area Emergency Plan in the event of a catastrophic failure of either reservoir. Both reservoirs are monitored to reduce flood danger during periods of peak flows and rainfall. Because all development would be located outside of the 100-year floodplain and the existence of the County's Operational Area Emergency Plans, there would be

no significant impact. It should also be recognized that the proposed uses are similar to those in the adopted Specific Plan.

3. By what methods and by how much dollar value will the project decrease expected average annual flood damages?

San Diego's climate does not produce annual flood events. Flood events occur intermittently, primarily in El Nino years. El Nino types of natural phenomenon are predicted to occur more often as a result of global warming (Dettinger 2002). The peak flow rates for the 10- and 100-year events (existing conditions at Riverford Road) as Published by the Department of Water Resources (2) are 3,500 cfs and 33,000 cfs respectively. The mean daily average flows recorded at the Santee gauging station (11020480), approximately 6 miles from the project site, range from 1.27 cfs in September to 94 cfs in February. The highest gauged flow in recent years was 6,010 cfs in 1992.⁹

The flood event in 1978 cost over \$15 million¹⁰. This cost translates to nearly \$67 million in today's dollars when adjusted by a 6% inflation rate. The cost for the 1980 flood was \$10,000. Given nearly the same level of damage, that figure was deemed not reliable by the County.¹¹

Channel Road serves as a key river crossing for people living and working in Lakeside. Hydraulic modeling of the existing river has indicated that the section of river immediately west of Channel Road is too narrow. This will cause water to back up and overtop Channel Road should any significant runoff event occur. Large scale scouring would occur should this section of the river fail. Widening the channel and floodplain in this area as proposed in this project would eliminate this problem and potential economic hardship associated with the loss of Channel Road. The increased transient storage and decreased velocities, and other flood control

⁹ County of San Diego, "San Diego River Project – Conceptual Master Plan," August 1983

¹⁰ Office of Emergency Preparedness, San Diego County

¹¹ The cost for the 1980 flood was given at \$10,000 in 1980. Given the equivalent level of damage, San Diego County deemed those figures unreliable. They are not included here.

devices included into the design of this project could potentially have prevented the disasters of 1978 and 1980.

4. How does the project affect the hydrologic and hydraulic conditions at the project site and adjacent properties?

This project will positively affect and benefit hydrologic and hydraulic conditions of the project site and protect adjacent property from flooding. San Vicente Dam and El Capitan Dam are located upstream of the study reach. Together they control about 85% of the watershed and, therefore, trap most of the sediment that would otherwise enter the project area. Upstream sand mining in the river bottom is expected to continue. The resulting excavations will trap river-borne sediment. For these reasons the river is sediment-deficient and will scour the channel bottom to reach equilibrium. Increasing the sinuosity of the river will decrease velocities, and providing for natural revegetation will decrease the erodibility of the riverbed and floodplain. Decreasing the velocity of water decreases its sediment demand. This may increase its potential for scour downstream if similar projects are not done. (See Appendix G for engineers evaluation)

a) Will the project reduce the magnitude of a flood flow, which could cause property damage and/or loss of life?

The project will increase the transitory storage and thus will decrease the flood peak. The increased river length due to the meanders will reduce velocities, which will increase the time of concentration of storm events, thereby further reducing the peak discharge. Equally important, it is also anticipated that storm water will filter through the wetlands back into the ground water to recharge and improve the water quality in the Riverview Water District well fields.

b) What are the effects of the project on water surface elevations during a flood event, which could cause property damage and/or loss of life?

The flood water surface elevations will be reduced dramatically from the existing pre-project elevations as the project proposes reducing the channel elevation and increasing the width of the

floodplain. The elevations should be similar or lower than those calculated in the Upper San Diego River Improvement Project Specific Plan adopted in 1992.

c) How are flow velocities impacted by the project during a flood flow, which could cause property damage and/or loss of life?

Flow velocities will be reduced due to the increase channel and flood plain width, which should reduce the probability of property damage during periods of peak flood flow. There will be increased storage capacity, which will reduce the flood peak downstream.

The flow velocities would decrease due to the increased river meander-length, which decreases grade; increased floodplain width which increases the surface area; and increased vegetation cover which increases the roughness coefficient.

Although the detailed hydrologic and hydraulic studies have not yet been completed, should these studies identify any area of concern which might increase the probability of increasing damage to adjacent property owners, the project will be redesigned to reduce those risks to acceptable standards. Table 5 outlines the steps to be undertaken in that process.

Table 5: Actions to Minimize Impacts to Adjacent Property Owners

Potential Impacts	Project Meets Requirements	Actions
Floodwater Impact Evaluations	✓	1) Hydraulic analysis modeling of flood flows for pre and post project conditions. 2) Sediment transport analysis for pre and post-project conditions. 3) Should the modeling studies show an impact to adjacent land users, the project will be redesigned to bring those risks down to a standard and acceptable level.
Levees	N/A	
Diversion Facilities	✓	1) Redesign Los Coches Creek discharge point. 2) Remove constriction at Channel Road bridge and redirect to allow passage of 100-year flood flows.
Agricultural Husbandry Practices	N/A	
Timber Extraction Operations	N/A	
Maintenance Plan	✓	1) Monitoring plan will be provided for with a trust fund. 2) Remedial maintenance will be based on recommendations from the monitoring. 3) Scheduled maintenance may be necessary for the upkeep of any nature trails and/or mosquito control needed due to standing water in floodplain depressions. 4) Emergency maintenance will also be conducted in events that require it, such as bank re-stabilization to protect adjacent property owners. 5) The focus of maintenance will be to ensure self-sustainability of enhanced floodplain, guaranteeing minimal impacts to adjacent property owners.

C. Restoration of natural processes (60)

1. Describe how any natural channel processes will be restored (for example: for channel meander, sediment transport, inundation of historic floodplain, etc.) and describe how these natural processes will affect flood management and adjacent properties.

Extensive flooding during the winters of 1978 and 1980, and the resultant damages, stressed the need for flood control measures in the Lakeside/ Santee area. The Upper San Diego River Improvement District (USDRIID), a redevelopment district, was formed as a response and a plan was developed for the channelization of the river. This plan was adopted by the County of San Diego and allowed for sand mining the flood plain, as well as for the reclamation of the land,

using fill to raise it out of the floodway. The reclaimed land was designated for industrial purposes.

In 2000, the RiverWay Specific Plan was approved because the community expressed grave reservation regarding the unsightly nature of industrial uses and the potential contamination to the groundwater from industrial spills and more effective flood control measures. There was also a need for more recreational opportunities and open space in Lakeside. This plan ensures that future development is not built within the 100-year floodplain, with the exception of necessary transportation, utility, and flood control improvements.

The purpose of this grant request, Flood Control, Habitat, Restoration and Recharge on the San Diego River, is to restore the degraded ecosystem structure, function, and dynamic processes of the river to a more natural condition, and in so doing reduce the risk of flood damage and/or loss of life. This will be accomplished by removing the fill from sand mining operations to re-establish the river's historic floodplain. A natural river meander with oxbows will be established for normal flows up to the 2-year storm event. Runoff from larger storm events will spill onto the floodplain and oxbows, where it will filter through indigenous riparian, wetland habitat and then back into the river and water table, thus removing impurities and sediment and improving water quality. (See Figure 2) The longer flow path, due to meanders, will reduce velocities and scour, and will reduce the size or even eliminate the need for the expensive drop structures proposed in the Upper San Diego River Flood Control Study. [ref March 1986 doc]

Restoring both aquatic and terrestrial ecosystem functions would improve their habitats compared to what presently occurs on-site. Restoration benefits resulting from this project include:

- Over 2 miles of restored stream meander and riffle pool complexes,
- 80 acres of wetlands, riparian and upland habitat, and associated wildlife value,
- Over 1,000 linear feet of restored SRA habitat and associated fish habitat,

- Increased number and diversity of aquatic invertebrates;
- Improved water quality,
- Reduced risk of flooding, and
- Approximately 675 acre-ft of transitory storage.

2. Describe any upstream or downstream hydraulic or other effects (such as bank erosion or scour, sediment transport, growth inducement, etc.).

Urbanization with its attendant increase in impervious surfaces will continue to increase the potential for flashier storm flood events and cause precipitation to quickly enter the watershed. That process will continue to be a concern in terms of scour, sediment transport, etc. Widening the flood plain to capture and slow these events has a beneficial effect on downstream structures. Additionally, increasing urbanization has a detrimental effect on water quality in the watershed.

The State Water Resources Control Board has proposed the Lower San Diego River, of which this project is a part, be part of the 303(d) listings for the following pollutant/stressors: Low Dissolved Oxygen, Phosphorous, and Total Dissolved Solids. The project will create and enhance riverine and riparian habitats. These habitat types are known for their cleansing of water both for downstream users and with regard to improving the quality of recharge to the local aquifer.¹²

It is anticipated that this project will improve hydrologic and hydraulic conditions in the upstream and downstream areas through the removal of flow restrictions and through bank stabilization. The final design will reflect a natural meandering of the river that will allow for a rich riparian habitat, groundwater recharge and flood management. In addition, the natural meandering will reduce velocities, thereby reducing scouring and sediment transport downstream, and protecting important flood control structures upstream and downstream from the project area.

3. If the project includes channel modification or bank protection work, will riprap or dredging be part of the design? If so, provide an analysis of potential benefits and impacts.

The final channel modification design will be based on fluvial geomorphic and hydraulic analysis, to include sediment transport modeling. It is anticipated that bank protection will be required. The options include but are not limited to riprap, rootwad revetment, native vegetation (willows plantings), geosynthetic fabrics/materials, revegetation efforts, etc.

D. Project effects on the local community (60)

1. How will the project impact future flooding on and off this site?

San Diego's climate is such that flood events occur infrequently, however, when floods occur the results are devastating. The channelization of the San Diego River in this reach has only been completed recently. It has not been tested with any amount of water. In 1995 and 1998, the area experienced flood flows of 5,000 to 6,000 cfs. Those flows nearly topped the existing channels. Increasing urbanization with its increase in flood flows will be balanced and enhanced with widening the channel, redesigning and slowing flows from Los Coches Creek. Providing extra capacity will reduce potential for scour and flooding for surrounding downstream land uses, particularly residential uses and other downstream uses.

2. How will the project affect emergency evacuation routes or emergency services and demands for emergency services?

The northern portion of Lakeside (known as Eucalyptus Hills) receives fire protection from the fire station located within the neighborhood. Given the undeveloped hills surrounding the community, however, urban-wildland interface fires are common and potentially very damaging. Access to these areas by a consortium of fire agencies is very important in fighting these wildland fires. Riverford Road and Channel Road are the primary access routes for emergency services, both for fire and medical services. Several 'back roads' can provide access but they are

¹² State Water Resources Control Board Website. 2002 CWA Section 303(d) list of Water Quality Limited

slower and not the preferred route. Loss of the bridges along Riverford Road and Channel Road would severely hamper the fire fighting efforts and access by emergency medical personnel. Both of these bridges were lost during the 1978 and 1980 floods. The project will reduce the potential for damage to these bridges.

This project has the added advantage that restoration will remove the massive stands of highly flammable *arundo donax* and replace it with less flammable willows and other riparian species. The project location possesses several in place fire breaks and access points. State Route 67 forms the southern boundary of the area and the less vegetated river channel forms the northern boundary of the area. Overall the project will decrease the potential for fire within the river channel and is a net benefit to the fire department.¹³

3. Explain how the project will comply with the local community floodplain management ordinance and the floodplain management criteria specified in the Federal Emergency Management Agency's National Flood Insurance Program (FEMA's NFIP).

The Flood Damage Prevention Ordinance, Watercourse Ordinance and Resource Protection Ordinance all contain land use definitions that prohibit any activity that will impair, impede or accelerate the flow of water in a watercourse, prohibit the construction of any structure or facility or committing any act that would increase the flood level or impair the ability of floodways to carry and discharge the 100-year flood without first obtaining a written permit from the Director of Public Works. This project is designed to remove the constriction in the floodway and allow for 100-year flood flows, reduce flow velocities and divert flows into a meandering river system, capture transient flood flows for habitat and recharge, and provide extra flood control capacity in an increasingly urbanized watershed. In essence, this project facilitates the implementation of the three applicable ordinances in the Lakeside area, and promotes flood safety for Lakeside residents. The FEMA NFIP requirements concerning floodplain management criteria generally specify that any development that is allowed to occur within the floodplain must follow the

Segments, (Draft)

¹³ Terrence S. DeVine Fire Marshall, Lakeside Fire Department

requirements of existing ordinances and be flood-free. These criteria are being complied with through the acquisition of easements and other interests in real property and through the implementation of local ordinances relating to floodplain management. In addition, this project does not permit development in the acquired floodway. Rather, it reduces future potential for development and consequently any future potential for flooding in the subject area.

E. Value of improvements protected (70)

1. What is the assessed value of structural improvements that will be protected by the project?

The Riverview Water District estimates that it will cost between \$500,000 to \$600,000 to replace the wells and the existing water supply pipes located on the site. They also estimate the cost for replacing the MTBE treatment plant located at the site at \$500,000.

The cost of replacing the San Diego County Water Authority Pipeline is estimated at approximately \$1000 per linear foot. A complete loss of the pipe during a flood event would cost approximately \$575,000 to repair. That does not include the cost of the stabilization structure.

Lakeside Land Co. a sand and gravel mining company has spent over 42 million dollars over the course of twenty years in the reclamation, channelization, and restoration of the land they own both on the northern and southern side of the river.¹⁴ In an effort to secure the ‘best’ estimate of the value of the improvements protected, the replacement values and the current cost of improvements are considered similarly in Table 6.

¹⁴ Statements made by Lakeside Land officials to County Supervisor Dianne Jacob.

Table 6: Value of the Improvements Protected

Improvement	Value in current dollars
Riverview Water District Wells	\$600,000
Riverview MTBE Treatment Facility	\$500,000
San Diego County Water Authority Pipeline	\$575,000
San Diego County Water Authority Stabilization Structure	\$2 million ¹⁵
Lakeside Sanitation Trunk Line	\$784,000 ¹⁶
RCP Drop Structure	\$4.5 million ¹⁷
Riverford Bridge	Amount unknown but see replacement value. (See question 2)
Lakeside Land Co.	\$42 million
Total	\$50,884,000

2. What is the estimated replacement value of any flood control facilities or structures protected by the project?

The Riverford Bridge and its associated on and off-ramps to Highway 67 are scheduled to be widened in the next several years. The value of those improvements is anticipated to be \$8 million to widen the bridge and \$7 million to construct the on and off ramps.¹⁸

¹⁵ Estimates by county officials. Cal-Mat officials don't remember when it was put in or exact dollar figures.

¹⁶ George Reams, Department of Public Works, County of San Diego, estimate of replacement cost

¹⁷ Gene Chubb, President of RCP Block place the cost to construct the drop structure in 1984 at \$1.5 million. The replacement cost is based on a 6% inflation rate.

¹⁸ Estimate by Doug Isbell, Department of Public Works, County of San Diego

A. (340xF points) Wildlife Benefits

A1. Importance of the site to regional ecology (70 points)

1. Describe any habitat linkages, ecotones, corridors, or other buffer zones within or adjacent to the site. How are these affected by the project?

The San Diego River functions as an important regional wildlife movement corridor. The relatively unbroken area of natural habitat that stretches from the coast to many areas of natural open space and public land located several miles inland provides dispersal pathways for many of the wildlife species that occupy the riparian, transitional zones (ecotones) and adjacent upland habitats in the area. This area has been identified as part of a "regionally significant biological linkage for MSCP covered species" by the CDFG and USFWS and connects the NCCP/MSCP plan areas of the Cities of San Diego and Santee, and County of San Diego.

The project will significantly increase the net acreage of riparian and upland habitat types found on site by approximately 45 acres. As part of the restoration, the project will re-establish a functional floodplain zone that has been eliminated through the importation of over 1 million cubic yards of fill. Floodplains are essential habitat for species that depend upon the dynamic changing nature of river systems. It is anticipated that there will be a significant increase the diversity of species, and availability of quality nesting, burrowing, and foraging areas. With restoration complete, the approximately 120-acre area will be a vastly improved complex of river system habitats. Besides improving overall quantity and quality of habitat, the project will eliminate the direct and indirect impacts that would result from the industrial development of the site.

2. Is the site adjacent to any existing conservation areas?

Besides being within the MSCP plan area for the County of San Diego, the site

is 0.75 mile upstream and east of a planned MSCP conservation area within the City of Santee. It is adjacent to, and includes, the fully protected riverway and biological buffer, so designated by the wildlife agencies, Army Corps of Engineers, and County of San Diego (S-80 zone) as mitigation for previous extraction impacts. The eastern boundary of the site is adjacent to the Bill Signs Trucking Mitigation Area which supports endangered least Bell's vireo and other sensitive species.

3. Describe any plans for aquatic restoration resulting in in-stream benefits.

Part of the biologic studies conducted for this project will be an examination of the potential for creating and enhancing habitat for several threatened and endangered aquatic species. The studies will include looking at the hydro-period for the lifecycle of these creatures.

The San Diego River is part of the endangered Arroyo Toads' historic range. The project will create habitat suitable for this species. The Arroyo Toad likes sandy, stable terraces along stream banks, with scattered shrubs and trees such as mulefat and willow. When breeding, they prefer open pools with gravel or sandy bottoms found near large streams. Adults need fine sand to furrow into over winter. The existing ponds and the sandy alluvium found in the San Diego River make the creation of suitable habitat very possible.

The project also has the potential for creating and enhancing habitat for the Southwestern Pond Turtle (California Species of Special Concern). The turtle requires upland areas to lay their eggs, and overwinter in underground burrows. During the warmer months, they are found basking on rocks and logs near slow-moving water. The San Diego River is part of its historic range, and the existing ponding structures lend themselves to the enhancement of habitat for this species.

Finally, the restoration project will create artificial bank cantilevers to act as nurseries for existing fisheries.

4. Discuss any natural landscapes within the site that support representative examples of important, landscape-scale ecological functions (flooding, fire, sand transport, sediment trapping etc.)

The San Diego River represents the only remaining natural system for sand transport within the watershed below the reservoirs. The project will enhance those functions as well as re-establishing a floodplain component into the system. The significant net increase in native habitat will provide enhanced ecological functions for bio filtration, flood control, and sediment trapping.

A2. Diversity of species and habitat types (70)

- 1. Does the site possess any:
 - i. areas of unique ecological and /or biological diversity?**
 - ii. Vegetative complexity either horizontally or vertically?****

Riparian complexes and associated uplands are highly diverse habitats. Riparian habitats in particular support more species of birds than any other habitat type in California. More than 140 species occur in this habitat, and 88 of these are obligate riparian species (Faber *et al.* 1989). The project site has areas with very high habitat quality (based on MSCP habitat evaluation standards) and is very diverse. Post restoration diversity is expected to be even higher due to the creation of a functional floodplain and dynamic, diverse ecotonal margins.

The San Diego River is the major east-west wildlife corridor for the central portion of the county. The San Diego River Park effort is focused on enhancing this corridor, including the project site. Acquisition, restoration and enhancement, management, monitoring, and water quality programs are all being ramped up along the river. It is expected that the river corridor and associated habitats will show significant increases in health and diversity over time.

2. Describe habitat components including year-round availability of water, adequate nesting/denning areas, food sources, etc.

Many animals in upland communities are attracted to riparian woodlands for access to water, shelter, and shade, particularly during the rainless southern California summers. For the needs of those species and resident species, the habitat components along the margins of open water and adjacent riparian associations are reasonably diverse and healthy. Emergent sedges, cattails, and rushes are dense and provide high quality shelter, nesting and foraging opportunities. Willows and cottonwoods provide shelter, nesting sites and food for resident and migratory avian species. The river and associated ponds provide a year-round water source. Upland habitats are much more disturbed and are less suitable for nesting, shelter, and foraging. Existing habitat areas will be enhanced, monitored, and managed and increased by approximately 45 acres.

3. Describe any superior representative examples of specific species or habitats.

The project site does not contain superior examples of species or habitats but does support rare, threatened, and endangered species and sensitive habitats. One of the primary objectives of this project is to establish this area as a "gold-standard" example of riparian and floodplain restoration. It is the intent of the Lakeside Conservancy to set a regional standard for restoration and habitat management and monitoring, and it is anticipated that population increases for resident species will be significant.

4. Does the site contain a high number of species and habitat types? List and describe.

In the undisturbed areas of the site, overall biotic diversity is quite high. Seventy-five bird species have been observed in the project vicinity (Revised USDRIP Programmatic EIR, August 2000- grant appendix). Mammalian species observed or expected on site include brush rabbit, California ground squirrel, coyote, bobcat, opossum, raccoon, striped skunk, Botta's pocket gopher, northwestern San Diego pocket mouse and southern grasshopper mouse. Reptiles observed or expected on site include Coronado Island skink, coastal western and orange throated

whiptail lizards, two-striped garter snake, San Diego ringneck snake, and coast patch-nosed snake.

The broad categories of habitats found on site are non-native grassland, riparian habitats, open water, and coastal sage scrub. Riparian habitats are sub-divided into communities depending on hydrologic associations. The margins, islands, and shallows of the open water support emergent riparian species including various rushes, sedges, and cattails. In the more moist woodland areas, stinging nettle, wild rhubarb, curly dock, water-cress, western ragweed, and California mugwort are found. Willows including arroyo and black, as well as Fremont's cottonwoods dominate the riparian woodland. Mulefat, baccharis, and immature willows characterize the riparian scrub. The Coastal sage scrub plant community includes buckwheat, white sage, broom baccharis, laural sumac, San Diego sunflower, and California sagebrush. (See attached **Sensitive Biological Resources in the USDRIP Vicinity, Final Programmatic EIR, 2000**)

5. Does the site contain populations of native species that exhibit important subspecies or genetic varieties historically present prior to European immigration?

From research resources available, it appears there is no documentation of sub-speciation or identified genetic variability in wildlife since the beginning of European settlement of the San Diego region by Juan Cabrillo in 1542. Significant alteration of the environment has occurred however, resulting in a vastly different complex of flora and fauna. For instance, the San Diego River was at the time of European settlement, a wide, intermittent river with an extensive sand and cobble floodplain and associated plant and animal life. Additionally, a number of non-native plants and animals have been introduced to the region.

A3. Ecological importance of species and habitat types (100)

1. Discuss the significance of habitat types at this location and include any local, regional, or statewide benefits received by preserving or improving the area.

Despite the fact that riparian ecosystems comprise a small proportion (<3%) of the landscape of southern California, numerous studies have shown that they support a disproportionate number of vertebrate species when compared to upland areas (Hubbard 1977). These systems are the most productive, biologically diverse, and threatened in the southwestern United States (Johnson and Jones, 1977). Regional MSCP analysis has shown that river corridors function as important dispersal linkages for a large number of MSCP covered species. Over half of the 85 species on the MSCP covered species list are wetland dependent species, the majority of which are riverine system associates. These facts underscore the important biological functions and values of the existing habitat on site, and highlight the value of increasing and enhancing the aquatic and riparian habitat associations.

Like the majority of river systems in southern California the ecological functions of the lower San Diego River have been highly impacted by development and extraction activities over the last half-century. Increasing and restoring riparian complexes in the project area will help to reverse this trend. Improvements will produce overlapping benefits for local, regional and state concerns.

Locally, the net increase in native, and enhancement of existing habitat will benefit covered species and habitats of the MSCP and help ensure the broader public benefits that flow from the success of the program. Habitats include open water, four riparian complexes, and coastal sage scrub. Numerous covered species will benefit including federally and state endangered least Bell's vireo, southwestern willow flycatcher, and California gnatcatcher.

The project will also enhance natural bio-filtration, sediment removal, stream velocity and flow, and overall water quality in the San Diego River and large (70,000 acre foot) Santee/El Monte aquifer. (The Riverview Water District was awarded a \$1.3 million grant to establish a constructed treatment wetland on the project site.) Water quality enhancements will have both direct and indirect positive impacts on biological resources. Enhancements to local water quality

and supply will benefit the state CalFed program by reducing local demand thereby increasing the amount of water available in the delta system while addressing the regional water shortage. (See Figure 3)

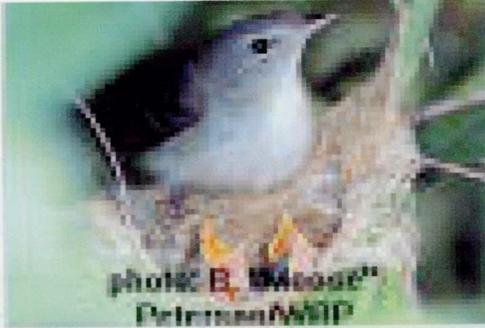
2. Does the site contain any significant wintering, breeding, or nesting areas? Does it fall within any established migratory corridors? What is the level of significance? How are these affected by the project?

Existing habitat provides breeding, nesting, denning, and foraging habitat for a number of riparian and upland species. Over 400 species of birds have been identified within the San Diego region; many of these are Pacific flyway migratory species such as yellow-rumped warbler, cedar waxwing, and winter wren which frequent riparian and associated upland habitats during fall and spring migration. Due to the reduced amount of riparian habitat in the lower, more temperate regions of the county, and limited opportunities to increase acreage, increases and enhancement of riparian habitat at this site is considered significant. The project site will not be directly accessible (there will be wildlife viewing areas) by the public allowing this relatively large area to function as a refuge, breeding, and dispersal area for wildlife.

3. Describe any existing habitats that support any sensitive, rare, "keystone" or declining species with known highly restricted distributions in the region or state. Does the site contain any designated critical habitat? How are these affected by the project?

Four keystone species are found within the habitat on site or within the immediate plan area. They are the least Bell's vireo (federal and state endangered), California gnatcatcher (federal threatened), southwest willow flycatcher (federal and state endangered), and further upstream, arroyo toad (federal endangered). These species are sensitive to human disturbance and are keystone indicators of declining habitat. The historical geographic range of these species has been significantly reduced. For example, populations of least Bell's vireo that previously occurred in the Owens Valley, Death Valley, Sacramento-San Joaquin Valley, and Sierra Nevada foothills have been completely extirpated (Draft Recovery Plan for least Bell's vireo, USFWS). Over 70% of gnatcatcher habitat has been lost to development in southern California (MSCP

Figure 3 Sensitive Biological Resources



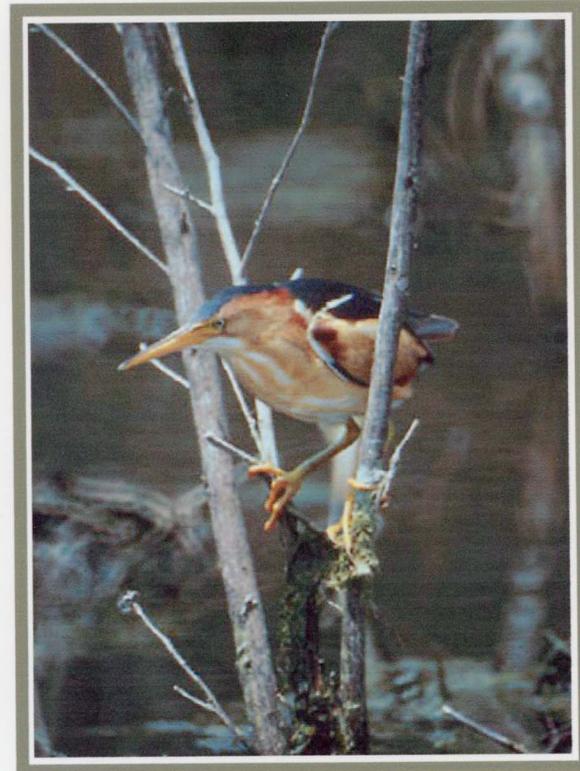
Least Bell's vireo
Vireo bellii pusillus



Southwestern willow flycatcher
Empidonax traillii extimus
Photo source: <http://www.aci-casc.com/aep/gallery.htm>



Yellow-billed Cuckoo
Coccyzus americanus
Phot by Rita Wege and Lary Prosser



Least Bittern Southern California

Ixobrychus exilis
Photo by Don DesJardin

Figure 3 (continued)



California Gnatcatcher,
Polioptila californica
Photo by Peter Weber



Muilla clevelandii.
***Liliaceae*-Lily family.**
San Diego goldenstar.

Photos by Kathryn Wild and
NAS Miramar Natural Resource Department



Cnemidophorus hyperythrus.
Orange throated whiptail.

Photo by Kathryn Wild and
NAS Miramar Natural Resource Department



Coronado Island Skink
Eumeces skiltonianus interparietalis
Photo by G. Nafis

Plan Vol.1). Similar circumstances apply to arroyo toad and southwest willow flycatcher. Critical habitat has been designated for the least Bell's vireo and California gnatcatcher within the project area. Each of these species will benefit from a net increase in habitat and the restoration, enhancement, monitoring, and management of the area.

4. What is the amount of shaded riverine aquatic (SRA) and riparian habitat to be developed, restored, or preserved?

A total of 45 acres of the site has been filled and padded for development. This total acreage will be restored to shaded riverine aquatic, riparian and associated floodplain and/or upland habitat. Exact acreage/habitat type will be determined by subsequent hydrologic engineering studies.

A4. Public benefits accrued from expected habitat improvements (60)

1. Describe present public use/access, if any. For instance, does or will the public have access for the purpose of wildlife viewing, hunting, fishing, photography, picnics, etc.

The public will gain viewing access to this project via the trail planned by San Diego County on the northern portion of the site. Because the site will be habitat to several threatened and endangered species, the public as a whole will not be allowed free roaming access to the southern project under general circumstances. The area will be made available for scientific research.

Several nearby parks including Santee Lakes and Mission Trails Regional Park attract between 400,000 and 800,000 annual visitors. The proposed project will be part of the Lakeside River Park, and a major hub for San Diego River Park users. It will be the link between the urban portion of the San Diego River Park to the west to the Pacific Ocean and the rural wild lands to the east to the Cuyamaca Mountains and Cuyamaca State Park.

The Lakeside River Park will have a variety of amenities. For example, the Lakeside Conservancy's vision includes a Nature and Cultural Center, baseball fields, soccer fields, and a

YMCA type facility. The trail planned for the north side of the project will connect the San Diego River Park from the mountains to the sea. It will also provide an important linkage in the County's Master Trails Plan.

The Small Communities Grant, awarded in 2002 contains approximately \$25,000 for public outreach and education, \$20,000 of which is specified to go toward the implementation of the Ranger Program at one of the local high schools. This hands-on program takes students to the river to investigate macro invertebrate zoology, animal tracking, habitat protection and enhancement, and water quality testing. It is a highly successful program used at West Hills High School in Santee, to teach students about the natural history of the river while meeting California standards for biology.

Additionally in the Small Communities Grant, \$5,000 is set aside for general public education about the river and the important role it plays in wildlife and water quality of the community.

2. Discuss areas on the site that are critical for successfully implementing landscape or regional conservation plans. How will the project help to successfully implement the plans?

The site is located within the jurisdiction of the County of San Diego, which adopted the Multiple Species Conservation Program in 1997. The site is subject to the implementing ordinance for the County MSCP. The MSCP, a component of the State Natural Communities Conservation Program (NCCP), is an ambitious regional conservation program that has been invested with hundreds of millions of dollars of public and private investment since adoption and provides multiple benefits for species, habitats, public enjoyment, and regional economic stability.

The project site comprises part of the Upper San Diego River/Lakeside linkage corridor to the San Vicente/Iron Mountain wildlife preserve and is a regionally significant biological linkage for MSCP covered species. Acquisition and restoration of this site will dramatically increase the

functions and values of this linkage. There are few if any sites along the urban segments of San Diego River that offer the opportunity, through the purchase of developable land, to increase rare riparian and floodplain complexes to the degree offered at this location. Once restored, the site will function as a nesting and foraging area and refuge for wildlife moving along the river corridor. Additionally, acquisition will eliminate the significant direct and indirect impacts associated with allowed industrial development of the site.

Management of the biological resources will be the responsibility of the Lakeside Conservancy and will help establish a standard for partnerships between local government (County of San Diego) and non-governmental entities working to support the regional conservation plans. The Conservancy anticipates establishing a Memorandum of Understanding with the County regarding MSCP default fee-title ownership and management obligations for this site.

3. Describe the surrounding vicinity. Include the presence or absence of large urban areas, rapidly developing areas, and adjacent disturbed areas with non-native vegetation and other anthropogenic features. Do any surrounding areas detract from habitat values on the site?

The acquisition target parcels are within a redevelopment areas know as the Upper San Diego River Improvement Project (USDRIP). This area includes a roughly two-mile, 552-acre stretch of the San Diego River which has, for the last 50 years, been mined for sand resources. These activities and associated industrial activities have seriously degraded the health of the river and have defined the character of the immediate surrounding community. The unincorporated community of Lakeside has a population of 40,000 people. The project area could be described as the eastern urban fringe of the San Diego River.

As regulatory mitigation for impacts, the river-way proper is reasonably healthy and intact but limited in scope and scale to the river-way proper and biological buffer.

The project site is adjacent to State Highway 67 on the south and Channel Road to the east. These road segments will help defend the acquisition/restoration area from direct and indirect impacts but will require attention to address water quality impacts from storm water runoff. The northern boundary of the site includes the 25-acre Hanson Aggregates concrete batch plant, a nine hole golf course and a 30-acre site zoned for industrial development. Hanson is relocating the concrete batch plant and will donate that site to the Lakeside Conservancy in the near future. Conservancy projects that will be located on this site include a Nature and Cultural Center and passive park. The park will be adjacent to the subject property and will be designed to eliminate impacts to the river. This Hanson donation will allow the Lakeside Conservancy to coordinate and enhance river restoration plans with the subject property.

Due east of the Hanson site and adjacent to the northern boundary of the subject property is the 9-hole golf course, which is relatively benign with respect to impacts to the river system. A hiking trail is located between the golf course and subject property outside of the biological buffer and has a composite of native and non-native plant associations. The Lakeside Conservancy will manage this area and eliminate non-native plants. Due west of the golf course is a 30-acre parcel of land that is in the process of being reclaimed following sand extraction activities.

The immediate surrounding developed area does not presently contribute to the habitat values of the site. It is anticipated however that the larger river park effort will provide additional opportunities for land acquisition, enhancement, and community involvement.

4. Describe compatibility with adjacent land uses.

The project site is located within the focused plan area for the regional San Diego River Park and is a key element in the Conceptual Master Plan for the park. That plan and subsequent Master Plan will guide land uses and strategies for the River Park. This project will help implement that plan. The RiverWay Specific Plan is the land use plan adopted by the

County Board of Supervisors for this area. This project is consistent with habitat and open space objectives of that plan. Adjacent land uses include industrial and residential development, road segments, and biological open space.

A5. Viability/sustainability of habitat improvements (40)

1. Describe any future operation, maintenance and monitoring activities planned for the site. How would these activities affect habitat values?

Although the goal is to create a self-sustaining habitat and dynamic river/flood system, a certain amount of maintenance and care will be required. The Lakeside Conservancy will develop and manage the implementation of maintenance protocols to address the following major issues: best management practices (BMP's) for sediment removal where stream flow is impeded, vegetation management, bank protection and to protect the property from encroachment, as well as minor issues of trash removal, removal of invasive non-native species, and stream and culvert blockages.

These protocols will:

- 1) Establish an annual time schedule for routine maintenance,
- 2) minimize impacts to native species especially special status species,
- 3) reduce short-term turbidity from maintenance activities,
- 4) minimize the use of herbicides,
- 5) minimize impacts on shaded riparian aquatic habitat,
- 6) minimize air and noise pollution to species and surrounding neighbors.

Scheduling of these activities will take place according to the hydro-period of the stream flows and the breeding and migration patterns of special status species. Vegetation maintenance is expected to take place year round. Any application of herbicide will occur between July 1 and October 1. Hand removal of vegetation will occur between July 1 and March 1. Hand removal within the stream channel will take place between November and December.

The FPCP grant proposal budgets \$120,000 as a trust fund to accomplish these goals. Revenues generated from this fund will be used for annual maintenance, which is estimated at \$100 per acre. Every effort will be made to use volunteer labor for as much of this work as possible.

The grantee will make an annual maintenance and monitoring report to include photo monitoring of flood facilities and habitat.

2. Does the site contain large areas of native vegetation or is it adjacent to large protected natural areas or other natural landscapes (for example, a large stand of blue oak woodland adjacent to public land)?

The site includes over 50 acres of restored aquatic and riparian habitat and is adjacent to the Bill Signs (riparian) mitigation area to the east. Immediately west of the project site are biological open space and mitigation areas that are in the process of being restored. Further west of the project area and located on the San Diego River are Mast Park in the City of Santee, and the 11,000-acre Mission Trails Regional Park in the City of San Diego. The City of Santee intends to complete its portion of the San Diego River Park over the course of the next 5 years as sand mining and reclamation activities are completed and as development occurs in Town Center. This park will also contain a large segment of habitat. Currently the western section of the San Diego River in Santee is the location of many breeding pairs of Least Bell's Vireo and will become one of the sources of nesting pairs to re-colonize the restored habitat within the proposed project.

3. Is the watershed upstream of the site relatively undisturbed or undeveloped and likely to remain so into the foreseeable future? Describe its condition.

The San Diego River flows for roughly 52 miles from two source areas in the Cuyamaca Mountains to the Ocean Beach area in the City of San Diego. Two reservoirs, San Vicente and El Capitan located on the river are approximately 23 miles from the headwaters. Between the reservoirs and the project site, the river travels approximately 7 miles through a rural landscape.

The project area defines the boundary between the urban and rural areas and is approximately 22 miles from the Pacific Ocean.

The upper watershed of the San Diego River represents some of the roughest terrain in the county and is mostly undisturbed. Deep gorges and chaparral-covered slopes define the majority of the landscape. The chaparral plant community transitions into coniferous forest in the upper reaches of the watershed. The majority of this land is in public ownership (Cleveland National Forest). Public ownership and rough terrain afford a high degree of protection for the upper watershed.

Further protection for the San Diego River watershed will be enhanced by the establishment of the San Diego River Park State Chartered Conservancy and the work product of the San Diego River Watershed planning presently underway (lead agency: County of San Diego). Both of these efforts are charged with protecting and enhancing the San Diego River resources including habitat, water supply and water quality. Additional protection will be afforded by the east county MSCP regional conservation plan, which will institute a multiple species and habitat protection program for this area. Preliminary planning for the east county MSCP has begun at this time. This plan will be implemented in part by Biological Mitigation Ordinance, which presently controls land use impacts to biological resources at the project location, and will ensure coordination of management and monitoring performance standards within the watershed.

Senator Barbara Boxer has recently introduced a bill that would provide Wilderness designation to the San Diego upper watershed.

4. Describe any populations of native species or stands of native habitats that show representative environmental settings, such as soil, elevations, geographic extremes, or climatic conditions (for example, the wettest or most northerly location of a species within the state.)

The project area, and in particular, the El Monte Valley directly upstream from the project site, is one of the warmest and driest in the western section of the county. Within a mile upstream of the project area, a disjunct desert plant species (Chipparosa discosa californica) can be found. This species was became separated from the desert variety 5,000 years ago when the climate of the region was warmer and dryer. The desert variety exhibits a red bloom, the Lakeside variety blooms with a yellow inflorescence.

Section B. Agricultural Land and Conservation Benefits section does not apply to this project. The project does not include any agricultural lands in any meaningful way. Questions B4, number 5) “Will the project as proposed impact the present tax base?” was answered primarily because this project is located in a tax increment finance district. (See Appendix H)

B. (340x F_a points) Agricultural Land Conservation Benefits

B1. Potential productivity of the site as farmland (120)

1. Describe the quality of the agricultural land based on land capability, farmland mapping and monitoring program definitions, productivity indices, and other soil, climate and vegetative factors.
2. Are projected agricultural practices compatible with water availability?
3. Does the site come with riparian, mineral, and/or development rights?
4. Is the site large enough to sustain future commercial agricultural production?
5. Does the site contain any adverse or beneficial deed restrictions affecting agricultural land conservation?
6. Describe the present type of agricultural use including the level of production in relation to the site’s productivity potential. What is the condition of the existing infrastructure that supports agriculture uses?

B2. Farming practices and commercial viability (40)

1. Does the area possess necessary market infrastructure and agricultural support services?
2. Are surrounding parcels compatible with commercial agricultural production?
3. Is there local government economic support in place for agricultural enterprises including water policies, public education, marketing support, and consumer and recreational incentives?
4. Describe any present or planned future environmentally friendly

farm practices (no till, erosion control, wetlands avoidance, eco-friendly chemicals, recycling wastes, water conservation, biological pest control).

B3. Need and urgency for farmland preservation measures (70)

1. Is the project site under a Williamson Act contract?
2. Describe the surrounding vicinity. Include the presence or absence of large urban areas, rapidly developing areas, low density ranchette communities, and adjacent disturbed areas with non-native vegetation and other human-induced features. Do any surrounding areas detract from agricultural values on the site?
3. What types of conversion or development are likely on neighboring parcels? What are the land uses of nearby parcels? Describe the effects, if any, of this project to neighboring farming operations or other neighboring land uses.
4. Describe the relationship between the project site and any applicable sphere of influence.
5. Is the agricultural land use on the project site consistent with the local General Plan? Does the General Plan demonstrate commitment to long-term agricultural conservation.

B4. Compatibility of project with local government planning (50)

1. Is the agricultural land use on the project site consistent with the local General Plan? Does the General Plan demonstrate commitment to long-term agricultural conservation?
2. What is the present zoning and is the parcel developable?
3. Is there an effective right to farm ordinance in place?
4. Is the project description consistent with the policies of the Local Agency Formation Commission?
5. Will the project as proposed impact the present tax base? (See Appendix H)

B5. Quality of agricultural conservation measures in the project (50)

1. For agriculture lands proposed for conservation, describe any additional site features to be conserved that meet multiple natural resource conservation objectives, including wetland protection, wildlife habitat conservation, and scenic open space preservation where the conservation of each additional site feature does not restrict potential farming activities on the agriculture portions of the site.
2. What are the present biological/ecological values to wildlife? How are these values affected by the proposed project?
3. Is the project proponent working with any local agricultural conservancies or trusts?
4. Does conservation of this site support long-term private stewardship of agricultural land? How does this proposal demonstrate an innovative approach to agricultural land conservation?
5. Without conservation, is the land proposed for protection likely to be converted to non-agricultural use in the foreseeable future?

VI. (320 points) Miscellaneous Benefits and Quality of Proposal

A. Size of request, other contributions, number of persons benefiting, cost of grant per benefited person (40)

Estimated Total Project Cost	<u>\$11,822,440</u>
Amount of FPCP Grant Funds Requested	<u>\$4,139,040</u>
(See Appendix I)	
Amount of Local Funds Contributed ¹⁹	<u>\$8,000,000</u>
Amount of In-kind Contributions	<u>\$63,000</u>
Additional Funding Sources	
<ul style="list-style-type: none"> • State Coastal Conservancy • Prop 40 via State Coastal Conservancy • Wildlife Conservation Board 	

Number of persons expected to benefit	<u>696,700</u>
Flood Protection Corridor Funds per person benefited.*	<u>\$5.60</u>

Table 7: Number of People Expected to Benefit

Category of People Benefiting²⁰	Number of People
Lakeside Residents living within 1.5 miles of the project.	31,000
Riverview Water District Customers	10,000
Tourists coming to the River Park ²¹	400,000
San Diego County Water Authority Customers	204,000
Lakeside Sanitation District Customers	37,500
Vehicle Trips per day across Riverford Bridge	14,200
Total	696,700

(* Count as beneficiaries those receiving flood benefits, recreational users of habitat areas protected by the Project, and consumers of food products from agricultural areas conserved by the Project.)

¹⁹ This is the amount of money contributed by other state agencies toward the acquisition of the property.

²⁰ This is a very rough accounting of people benefiting primarily because there is some overlap in areas considered. Some but not all of Riverview’s customers reside within 1.5 miles of the project. Some but not all of Lakeside Sanitation District customers reside within 1.5 miles of the project. The same holds true for vehicle trips per day.

²¹ Data from two nearby parks, Santee Lakes in Santee (400,000 visitors per year) and Mission Trails Regional Park (800,000 visitors per year) in the City of San Diego, both indicate that when the river park/trail are constructed, park will attract somewhere near 400,000 visitors a year

B. Quality of effects on water supply or water quality (90)

1. Will water stored by the project provide for any conjunctive use, groundwater recharge, or water supply benefit?

The project will produce tangible conjunctive use benefits to the Riverview Water District. The treatment wetland to be funded out of the Small Communities Prop 13 grant funds will improve the quality of the water pumped from the Riverview Water District wells. Conservative calculations suggest that, for reasonable percolation rates for the wetland in the rapid infiltration basin, approximately 80% of the pumpage could, in the future, be supplied by water percolating down from the constructed wetland.²²

Currently the Riverview Water District must purchase 100% of its water at a cost of \$565 per acre-foot. Historically, the district pumped 40% of its water from the Santee/El Monte Aquifer, which underlies the San Diego River. The cost was \$89 per acre-foot. Recently, MTBE contamination forced the shut down of those wells. The district recently received a large legal settlement. A decontamination facility is currently under construction with the proceeds of that settlement. When operational, the Riverview Water District will resume pumping groundwater for municipal use. The water in their wells is not of the highest quality. It has high levels of nitrates and total dissolved solids and consequently the District must purchase very expensive imported water to blend with ground water to meet drinking water standards at a 40:60 ratio well water to imported water. The Riverview Water District, in conjunction with the San Diego River Park – Lakeside Conservancy, recently received a \$1.29 million Small Communities grant to construct a palustrine wetland on the Cal-Mat property. The following table is a sensitivity analysis of the potential benefits derived from this project.

²² Small Communities Grant Application to the State Water Resources Control Board, Application No: 109 Project Title: Restoration and Recharge in the San Diego River Park: A Demonstration Project

Table 8: Riverview Water District Benefits Scenarios

<u>Baseline Numbers</u>		
Water Source	Cost per acre –ft (a.f.)	Total Water needed: 1425 acre-feet per year
Well Water	\$89	
Imported Water	\$565	

Scenario 1

<u>Current Situation</u>	Water used (a.f.)	Cost/a.f.	Total Cost
100% imported Water	1424	\$565	\$804,560

Scenario 2

<u>Pre-contamination Conditions:</u> 40% Well Water 60% Imported Water		
Well Water	570	\$50,730
Imported Water	855	\$483,075

Scenario 3:

<u>With Treatment Wetlands</u> ²³				
Increase in Well Water	Imported Water	Well Water	Total Cost	Annual Benefit to Riverview Water District
1%	\$475,023	\$51,998	\$527,0222	\$6,783
7.5%	\$422,690	\$60,241	\$482,932	\$50,872
15%	\$362,306	\$69,753	\$432,060	\$135,660

The proposed project with its increase of recharge and the creation of wetlands to purify water will enhance the Riverview Water District and the Lakeside Water District’s ability to use this local resource and reduce its dependence on imported water. This aspect is particularly important at this point in time. Drought in the Rockies, combined with decreases in Colorado River allocations to California, the failure of the Imperial Irrigation Water District agreement, and continuing population growth pressure increase the value of every acre-foot of water developed locally. The Riverview Water District and the Lakeside Water District are two of

²³ The constructed wetland is anticipated to improve water quality in the wells beyond the pre-contaminated conditions outlined in Scenario 2. It will allow the district to increase its blending ratio between 1% to 15% in favor of less expensive water

only five local San Diego water districts (out of 26 districts total) to use local groundwater supplies.²⁴

2. Does the project fence cattle out? N/A

3. Does the project pass water over newly developed fresh water marsh?

No, we will be constructing the marsh/wetland as a part of the project.

4. Does the project trap sediments? Yes

C. Quality of impact on underrepresented populations or historic or cultural resources (60)

1. Does the project benefit underrepresented populations? Explain.

The project is located in a ‘Slum and Blight’ area as designated by San Diego County for the purposes of Community Development Block Grant funding. Slum and Blight areas are characterized by low-income populations and by the quality of buildings and housing stock. Basically, this is a very poor area. There are many low-income housing projects in the area.

Additionally, the income statistics for this Slum and Blight area allowed the Riverview Water District to meet the low income requirements for the Small Communities Grant from Prop 13 which is administered by the State Water Resources Control Board. On average, people living in this area have household incomes that are 77% of the median household income for California.²⁵ Over 50% of the children living in this area receive ‘free and reduced’ lunch.²⁶

Historically, the population in this area has used the San Diego River as a source of recreation. Many people from this area have fished and swam in the river because it was close to their homes and because it was free. Although much of the San Diego River in this area is fenced and

²⁴ Bob Cook, General Manager of the Lakeside Water District.

²⁵ Pre-application, Small Communities Watershed Program. State Water Resources Control Board 2002

²⁶ Lakeside Union School District

not publicly accessible, there are still signs that the ponds are heavily used by local youth during the hot summer months.

2. Are historical or cultural resources impacted by the project? Explain.

The programmatic RiverWay EIR (2000) did not identify any cultural resources in the project area.

D. Technical and fiscal capability of the project team (60)

1. Does the project require scientific or technical expertise, and if so, is it provided for in the grant proposal?

This project will require scientific and technical expertise. The budget allows for contracting with a consulting firm that specializes in the creation of wetlands, restoration habitat, flood plains, watershed and river restoration and management and monitoring. A California corporation, Huffman and Carpenter, Inc. volunteered their time and services to assist with the writing of this grant. Huffman and Carpenter, Inc. a Wetland Regulatory and Hydrologic Consulting firm, with 12 years of experience in the field, has been involved in this project from the inception including the Small Communities grant. They specialize in ‘turnkey’ projects with expertise including but not limited to permitting, feasibility and engineering studies, construction plans and specifications, construction implementation and monitoring. This ‘turnkey’ approach allows for a timely and efficient, cost proposal without duplicating efforts. We anticipate continuing this relationship if we are awarded this grant. (See Appendix J) Additionally, we intend to create a technical advisory to provide oversight to the project.

2. Grant funds will be available in phases. What monitoring and reporting mechanisms are built into your administrative plan to track progress, initiation, and completion of successive phases?

This project is a very complicated that lends itself well to issues of phasing and co-ordination. The project has phasing and coordination issues with regard to acquisition and timing of funding;

issues with regard to the Small Communities Grant for the State Water Resources Control Board and issues with regard to implementing the project during periods of low flow.

A master schedule will be created which clearly delineates the timing on major milestones. That schedule will include funding and acquisition, studies, permits and plans, and excavation and implementation of the project. Subcontractors will be required to meet these milestones. Every month all of the parties involved with the grant will meet via a conference call or in person to discuss the progress and timing issues. At these meetings we will be able to anticipate timing issues and take the appropriate steps to rectify timing delays and other issues before they become critical issues. We will be using tracking software to facilitate coordination with critical path items.

A reporting schedule will be established. At a minimum, the report will contain a record of expenditures, a description of the project activities since the previous report, the status of the project relative to the master schedule, and key issues to be resolved. The first report will be delivered within three months of signing the contract or upon the receipt of the first invoice. Subsequent reports will be made on a quarterly basis or upon reaching major milestones, whichever comes first.

Standard accounting procedures will be followed at all times and records will be open for inspection and audit at any point during and after the completion of the project.

The San Diego River Park Foundation will be used as a fiscal agent for FPCP grant funding. When public funds are involved it is important to maintain arm's length as well as transparency in all transactions. One of the San Diego River Park Foundation's roles is to act as fiscal agent for organizations along the San Diego River.

3. Please outline your team’s management, fiscal and technical capability to effectively carry out your proposal. Mention any previous or ongoing grant management experience you have.

The scale and scope of the project require a wide variety of expertise and skills. A volunteer Technical Advisory Team will be established to oversee various aspects of the project.

Below are the names of the individuals who have agreed to be on the team. All bring a wealth of experience to the project and all are committed to Lakeside and the San Diego River. (See Appendix K for vitas):

- Jeanne Swaringen: Riverview Water District - Construction and fiscal management
- Deborah Jones: San Diego River Park – Lakeside Conservancy - Accountancy
- Jo Ann Anderson: San Diego River Park Foundation - Grants management and fiscal oversight
- Robert Hutsel: San Diego River Park Foundation - Project management and fiscal oversight
- Robin Rierdan: San Diego River Park – Lakeside Conservancy - Project management
- Iovanka Todt: Lakeside Resident - Project management and technical expertise
- Michael Dettinger: Scripps Institute of Oceanography - Groundwater, climate expertise
- Michael Beck: Endangered Habitats League - Land acquisition, habitat and funding expertise
- Michael Land: Volunteer - Groundwater hydrology, monitoring and aqueous geochemistry
- Susan Wynn: U.S. Fish and Wildlife Service - Regulatory permits, habitat planning and compliance
- Jerre Stallcup: Conservation Biology Institute - Regional Conservation planning, program standards

E. Coordination and cooperation with other projects, partner agencies, and affected organizations and individuals (80)

The successful implementation will require cooperation and coordination with a variety of groups, and state and federal agencies. In part those groups and organizations are: the State Coastal Conservancy, the Wildlife Conservation Board, State Water Resources Control Board, the U.S. Fish and Wildlife Service, the California Department of Fish and Game, the U.S. Army Corps of Engineers, County of San Diego, the City of Santee, the San Diego Urban Corps and many others.

The project additionally benefits from the synergy and leveraging of the Small Communities Grant from Prop 13. Both of the grants have roughly similar objectives while accomplishing different goals, namely both will create wetlands. The Small Communities Grant will create wetlands on approximately 5 acres of property with the goal of water purification and recharge. A Flood Corridor Protection Program Grant will create a variety of wetlands and riparian habitat types primarily to enhance flood protection while at the same time accomplishing many of the same objectives as in the Small Communities Grant. Given the nexus between the two grant programs, the grant co-sponsors will make every effort to coordinate tasks and timing between the two grants and their granting agencies. We will hold joint meetings early with both agencies, the State Water Resources Control Board, and the Department of Water Resources to discuss ways of coordinating activities to provide the maximum leveraging of funds and workload efficiencies.

1. List cost sharing and in-kind partners and any other stakeholders involved with your project and indicate the nature of their contribution, if any. Address the team's ability to leverage outside funds.

The San Diego River Park-Lakeside Conservancy has several cost-sharing and in-kind partners: The Riverview Water District, the National Park Service, and Huffman and Carpenter, Inc. All have contributed in-kind services to the River Park.

Currently, the Riverview Water District provides free office space as in-kind assistance to the Lakeside Conservancy. That is valued at approximately \$1000 per month. Additionally, the National Park Service has provided \$40,000 per year in in-kind technical assistance for the past year and a half. Other river park supporters have provided in-kind with copies and fax machine donations. We have a very active volunteer Board and over 1,100 members and an active volunteer base of nearly 50 people, who provide a variety of skills and significant time on the river park projects.

As shown in the budget section, one of the primary factors influencing the cost of this project is the amount of fill to be excavated from the project site. Nearly 2 million cubic yards of clean fill must be removed from the site. The Lakeside Conservancy has begun negotiations with Vestar Inc., a major land developer within the city of Santee. Vestar is sole contractor for development of the Santee Town Center, 300-acre tract within the San Diego River flood plain in the City of Santee. In order for Vestar to complete its project in Santee, it will require a minimum of 1 million cubic yards of fill to raise its projects out of the flood plain. The City of Santee is facilitating those discussions with Vestar. When they are completed, it is hoped that Vestar will remove the fill in Lakeside at no cost or pay the Conservancy and/or its designee a small per cubic yard fee for the material.

If the project was required to pay for the excavation and transport of fill, the costs could range anywhere from \$3 to \$4 per cubic yard or \$3.2 to \$4.3 million in total respectively. Should the Lakeside Conservancy be successful in negotiating a \$0.50 per cubic yard fee, that activity would generate approximately \$455,000.

(Please refer to the Budget in Appendix I)

2. Does your project overlap with or complement ongoing activities being carried out by others (such as CALFED, the Sacramento and San Joaquin River Basins Comprehensive Study, the Delta levee program, local floodplain management programs, the Reclamation Board's Designated Floodway program, or a multiple objective regional or watershed plan)? If so, indicate any coordination that has taken place to date or is scheduled to take place in the future.

The project supports the San Diego River Basin Plan developed by the State Water Resources Control Board, Region 9. The basin plan lists the following beneficial uses for this stretch of the river: Rec 1, Rec 2, WARM, COLD, WILD. The ground water basin's beneficial uses include MUN, AGR. Groundwater recharge and/or subsurface flows support the municipal wells located near the proposed project site.

The project will address the following goals and objectives as stated in the Region 9 Draft Watershed Management Approach. The project will begin to reduce the loss of natural channels, and loss of associated habitat complexity, including the loss of wetlands, wildlife, fisheries and riparian habitat. Restoring this property and placing it in conservation eliminates the potential for increase sedimentation due to construction activities that would otherwise take place on this site. Increased riparian vegetation will stabilize water temperatures, reduce the amount of non-native invasive species of plant such as *arundo donax* and restore the natural water quality purification functions that can intercept and assimilate known pollutants.

Recently, the County of San Diego received a Prop 13 grant to develop a stakeholder driven Watershed Management Plan (WMP) for the San Diego River Watershed. The proposed project in Lakeside supports and enhances many of the watershed project's goals and objectives as outlined below. The San Diego River Park – Lakeside Conservancy and the Riverview Water District have been active participants in this process.

“The main goal of the Prop 13 watershed project is to develop and implement a comprehensive and sustainable watershed management plan (WMP) to restore and protect water quality in the San Diego River Watershed. The Watershed Management Plan will, through a stakeholder process and integration with other watershed activities, provide best management practices, increased monitoring, education of stakeholders and residents, and strategies (structural and non structural solutions) to eliminate and or reduce pollutant levels consistent with the San Diego Regional Water Quality Control Board basin plan. The project aligns interested parties to ensure consistency with local watershed management and regional water quality control plans while reducing flooding, controlling erosion, improving water quality, enhancing regional water supplies, and supporting aquatic and terrestrial species habitats. Specific issues to be addressed in the lower watershed include: 1) NPS pollution, 2) coastal water quality, 3) groundwater protection, 4) wetlands protection, 5) flooding, and 6) recreation. Specific issues to be addressed in the upper watershed include, 1) protection of surface water supplies, 2)

habitat protection, 3) NPS pollution, 3) recreation, 4) flood management warning, and 5) agriculture. The framework will identify priorities and strategies for protecting and restoring natural systems of groundwater recharge, native vegetation, water flows, riparian zones, beneficial uses of waters and overall water quality.²⁷”

2. Will this application, if approved, begin the next phase of a previously approved project or advance an ongoing project substantially toward completion?

The Small Communities Grant application, received by the Riverview Water District could be viewed as Phase 1 of this project. It was not originally conceived in this manner. We have been working on acquiring the Cal-Mat land and the Lakeside Land Co. land for nearly 18 months. If we are successful in winning Flood Protection Corridor Grant funding, we would look for ways to implement both projects simultaneously. Both grants require similar studies, and similar permitting. Economies of scale could be achieved by combining much of the preliminary studies and possibly the permit work. (See Appendix L)

3. Describe how the proposal demonstrates a coordinated approach among affected landowners, local governments, and nonprofit organizations. If other entities are affected, is there written support for the proposal and a willingness to cooperate?

Letters of support have been received from a variety of organizations.

Table 9: Letters of Support

Public Agencies and Organizataions	Local Governments	Elected Officials	National Environmental Groups	State and Federal Agencies
Padre Dam Municipal Water District	City of Santee	Dede Alpert, State Senator Co-Author AB2156	San Diego Sierra Club	U.S. Fish and Wildlife Service
Lakeside Water District		County Supervisor Dianne Jacob	Endangered Habitats League	
San Diego Urban Corps			The Conservation Biology Institute	

²⁷ Todt, Iovanka, Watershed Project Manager, Watershed Management Section, County of San Diego Department of Planning and Land Use

Bibliography

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10. Project Clean Water Website <http://projectcleanwater.org/>
11. 'Southern California Wetlands Recovery Project: Regional Strategy' Southern California Wetlands Recovery Project, part of the State Coastal Conservancy Program
12. *Watershed Management Approach for the San Diego Region*, 8th version, California State Water Quality Control Board, San Diego Region 9.
13. *San Diego River Project: Preliminary Master Plan*, Wirth Associates, prepared for the County of San Diego, 1992

14. *Ground Water Conditions in the San Diego River Valley: A Report to the San Diego Regional Water Pollution Control Board*, (No.9) Project Code No. 59-9-1 September 1965
15. *Upper San Diego River Flood Control Study: Santee City Limits to Confluence of San Vicente Creek*, Prepared for the Upper San Diego River Improvement Committee, by the County of San Diego, Department of Public Works and George Nolte and Associates, March 1986
16. Lakeside Economic Revitalization Plan, Prepared by the County of San Diego, Department of Planning and Land Use, 1999
17. *Floodplain Analysis: Lakeside Sanitation Sewer District Crossing the Upper San Diego River*, County of San Diego, Department of Public Works, Flood Control Engineering, 1994
18. *Upper San Diego River Improvement Project: Final Programmatic Environmental Impact Report*, Prepared for County of San Diego, by P&D Environmental Service, San Diego, 2000
19. County of San Diego, Flood Plain Maps 1, 2, 3 1985
20. San Diego River Plan, adopted by County of San Diego 1992
21. *Calmat Lakeside Final Reclamation Plan RP 84-004W1*, prepared by New Horizons Planning Consultants, Inc. and BDS Engineering, Inc.
22. *San Diego County Flood Control District, Storm Report*, February 1980
23. Redevelopment Agency of the County of San Diego: *Audited Financial Statements*, 2002
24. *Quantifying Our Quality of Life*, prepared for the East Bay Regional Park District by Economics and Planning Systems, Inc. 200

Other Resources

1. Carpenter, Lori, Principal, Huffman and Carpenter, Inc. Wetland and Regulatory Consultants
2. Isbell, Doug, Department of Public Works, San Diego County
3. Office of Emergency Preparedness, San Diego County
4. Terrence S. DeVine, Fire Marshall, Lakeside Fire Department

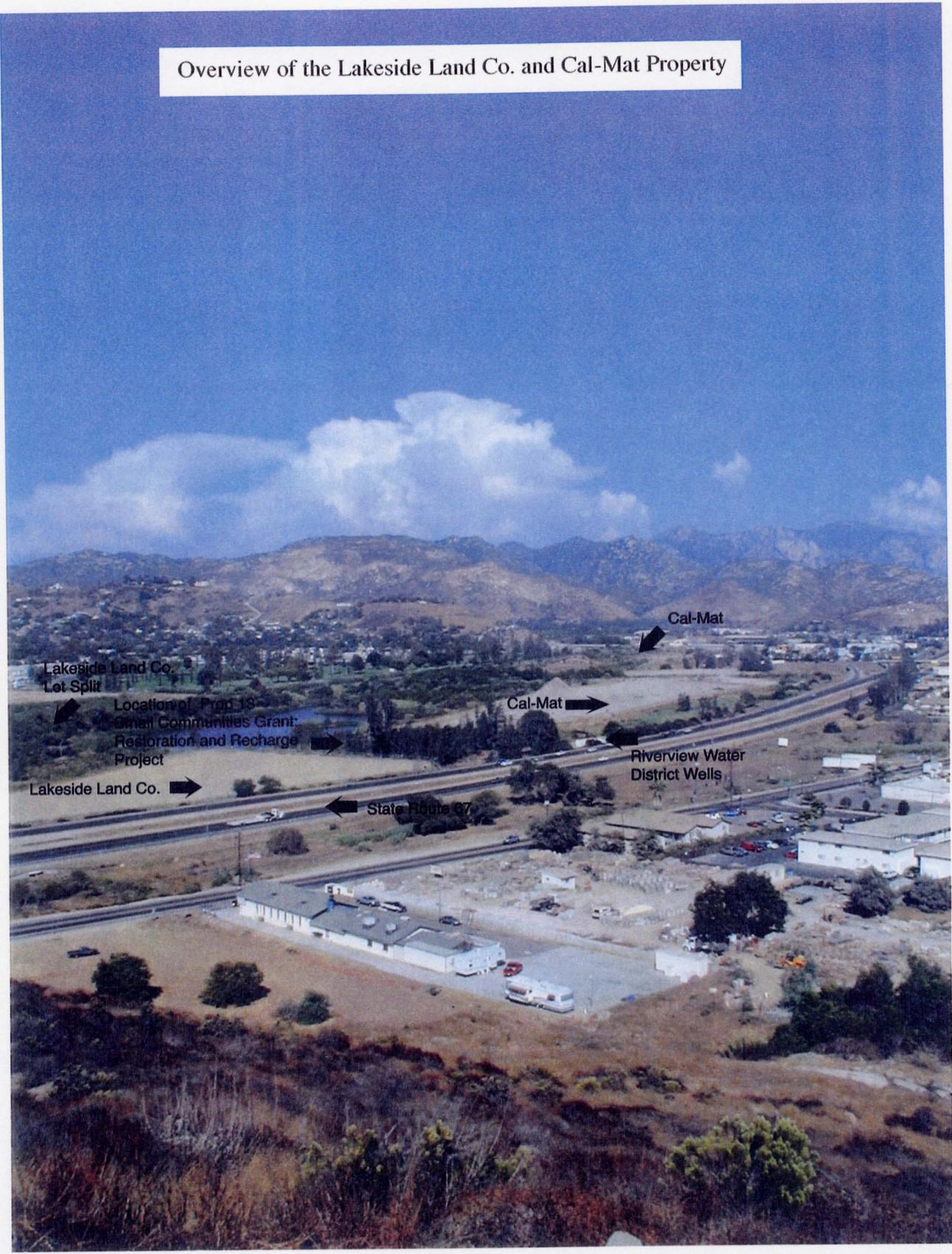
5. Gene Chubb, President of RDB Block
6. Dorothy Leonard, Mission Trails Regional Park Foundation
7. George Ream, San Diego Department of Public Works
8. Bob Cook, General Manager, Lakeside Water District
9. Jeanne Swaringen, General Manager, Riverview Water District
10. Lakeside Union School District

Appendices

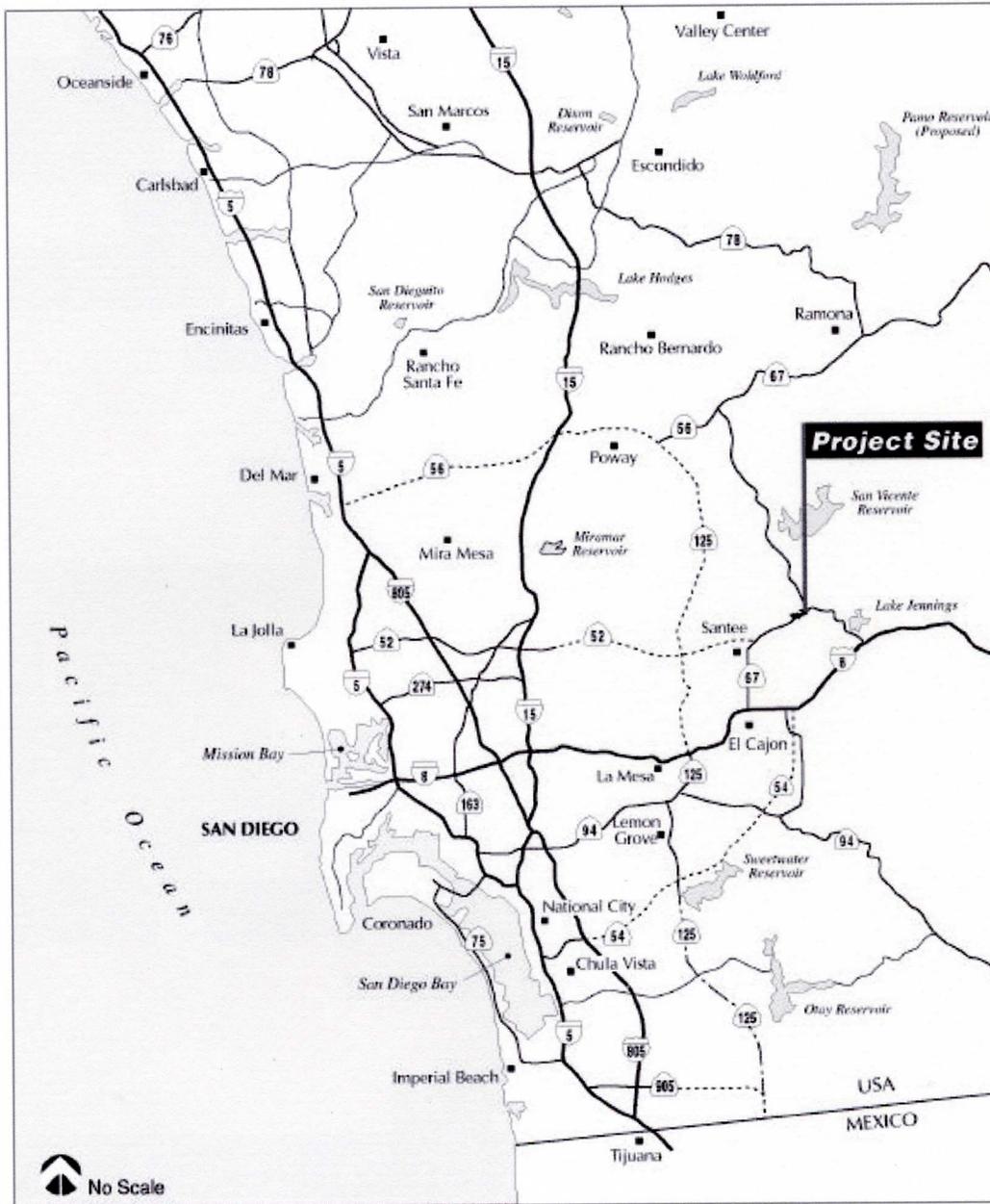
Appendix A-1	Map of regional vicinity
Appendix A-2	Map of property boundaries and APN
Appendix A-3	Map of Geographic Extent of the Santee/El Monte Groundwater Basin
Appendix A-4	Map of Lot Line Adjust & Donate Parcels by Lakeside Land Company
Appendix A-5	Map of neighborhood attributes
Appendix A-6	Map of Flood Inundation and Flood Structures
Appendix B	Applicant Documents
Appendix C	Flood Photos
Appendix D	Initial Study and existing EIR
Appendix E	Photos of Site, including Major Constriction
Appendix F	Funding Commitments, Letters from Willing Sellers and Notification Letters sent to Adjacent Landowners
Appendix G	Evaluation Letter from Civil Engineer
Appendix H	Tax Base Information
Appendix I	Project Budget and GANT Chart
Appendix J	Background information about Huffman and Carpenter
Appendix K	Vitas of Technical Advisory Team
Appendix L	Awarded Prop 13, Small Communities Grant, Watershed Protection Grant Program
Letters of Support:	Supervisor Dianne Jacob, District 2, County of San Diego State Senator Dede Alpert, 39 th District Peter Sorenson, US Fish and Wildlife Service Martha Coffman, Sierra Club Randy Voepel, Mayor, City of Santee Lakeside Water District Board Members Padre Dam Municipal Water District Conservation Biology Institute Urban Corps of San Diego Endangered Habitats League

Appendix A-1
Map of Regional Vicinity

Overview of the Lakeside Land Co. and Cal-Mat Property



**PROJECT DESCRIPTION, LOCATION
AND ENVIRONMENTAL SETTING**



Regional Map

Upper San Diego River Improvement Project EIR

Source: Upper San Diego River Improvement Project EIR

Appendix A-2
Map of Property Boundaries and Assessors
Parcel Numbers



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USDRIP Trails Master Plan
2000 Color IR Aerial Photography

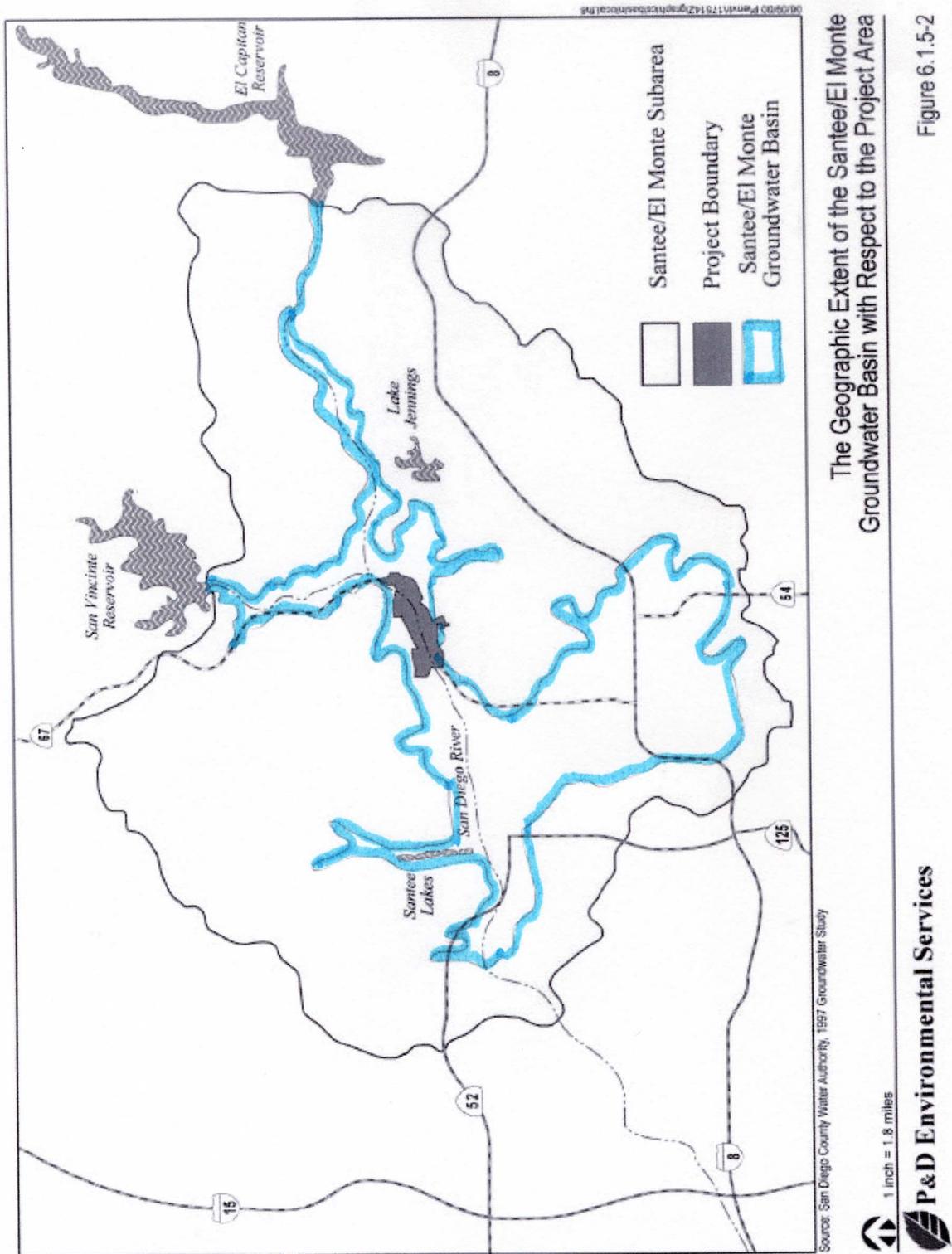
0 0.125 0.25 0.5 Miles

- Lakeside Land Co.
- Calmat Property
- Lakeside Land Lot Split

PROJECT AERIAL MAP
 APN's and Property Boundaries

Appendix A-3
Map of Geographic Extent of the Santee/El
Monte Groundwater Basin

**ENVIRONMENTAL EFFECTS
FOUND NOT TO BE SIGNIFICANT**

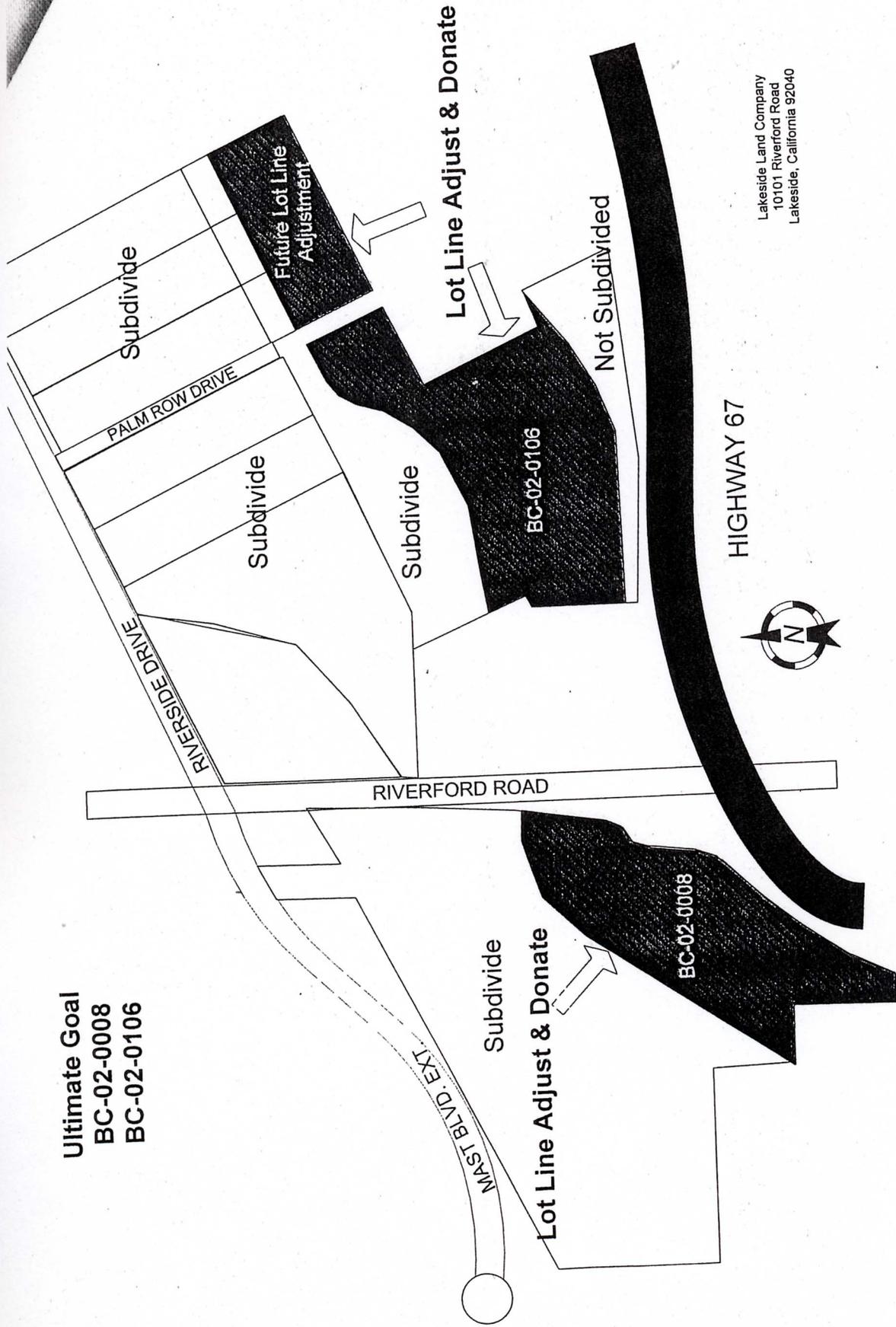


The Geographic Extent of the Santee/EI Monte Groundwater Basin with Respect to the Project Area

Figure 6.1.5-2

Appendix A-4
Map of Lot Line Adjust & Donate Parcels by
Lakeside Land Company

Ultimate Goal
BC-02-0008
BC-02-0106

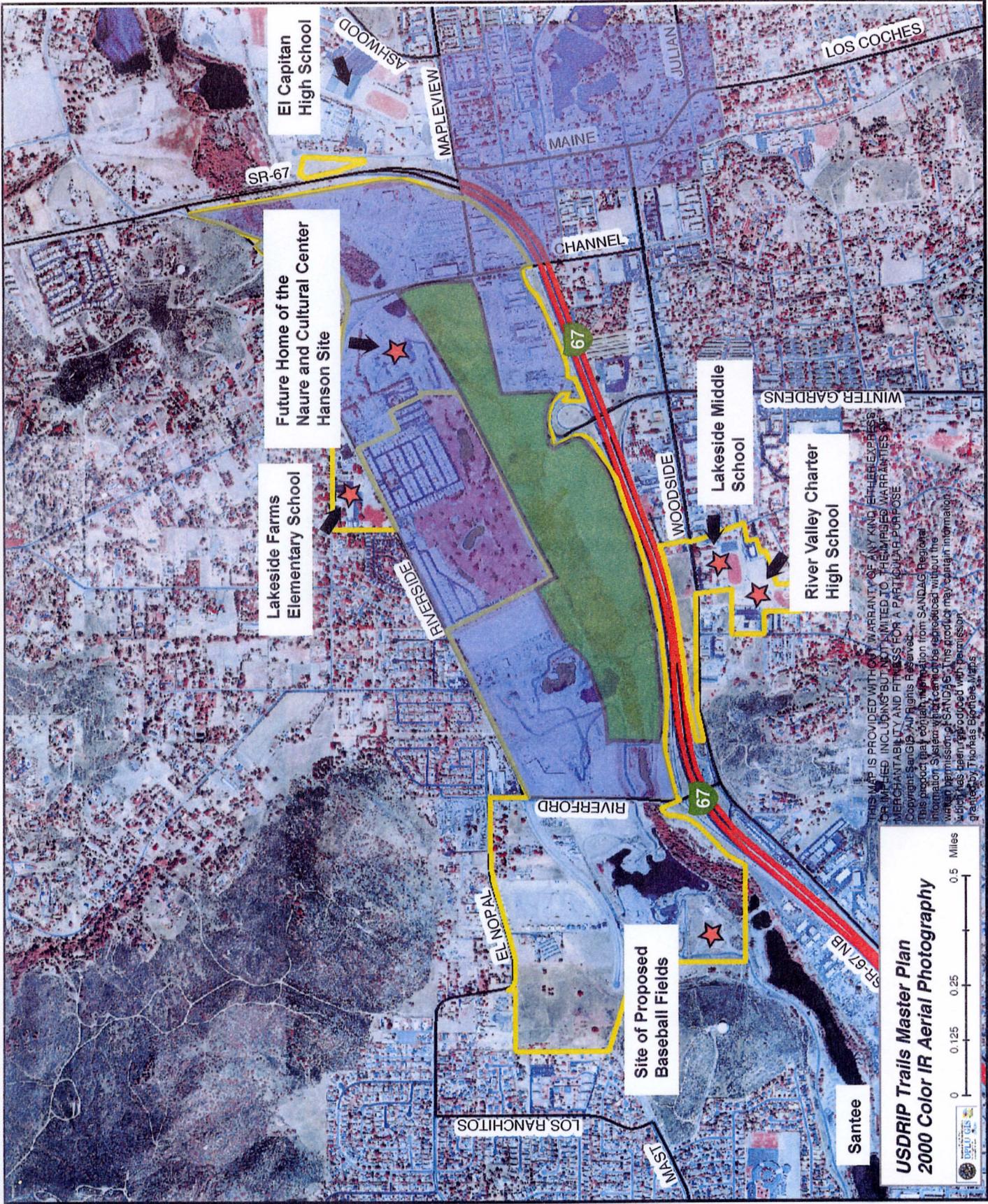


Lakeside Land Company
10101 Riverford Road
Lakeside, California 92040

State
Title
17/5e
1/17/20
Sweet

13
24

Appendix A-5
Map of Neighborhood Attributes



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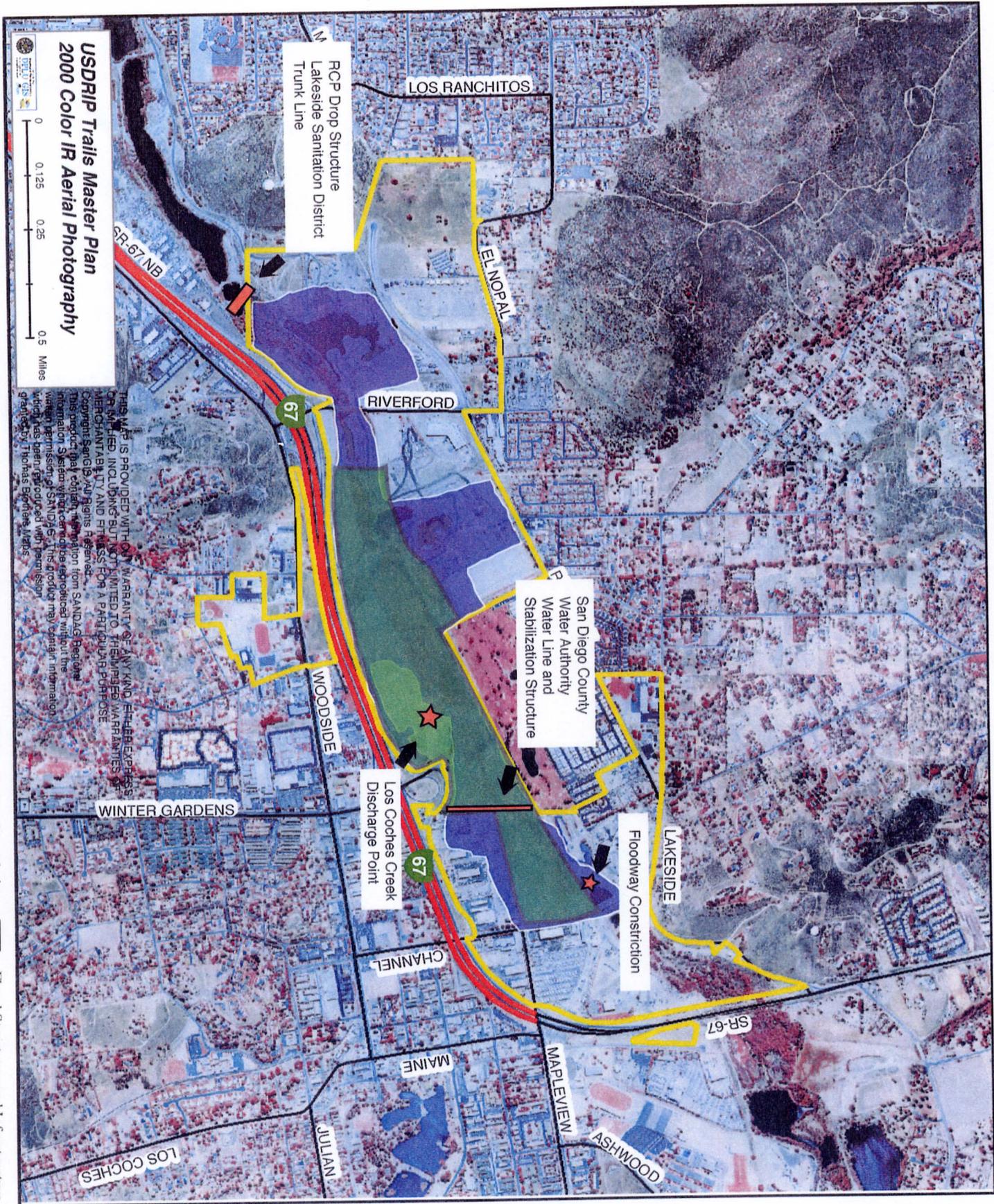
USDRIP Trails Master Plan
2000 Color IR Aerial Photography

0 0.125 0.25 0.5 Miles

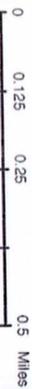
PROJECT AERIAL MAP
 Vicinity of Project

- Slum and Blight Area
- Project Boundaries
- Schools

Appendix A-6
Map of Flood Inundation and Flood
Structures



**USDRIP Trails Master Plan
2000 Color IR Aerial Photography**



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PROJECT AERIAL MAP Special Flood Hazard Area Inundation by 100 Year Flood Project Boundaries Flood Structures and Infrastructure
 Flood Inundation and Flood Structures

This map is a close approximation of the inundation areas described in National Flood Insurance Program 1997 Map Numbers: 06073C1656 F and 06073C1653 F

Appendix B
Applicant Documents

The San Diego River Park Foundation

Board of Directors:

Jo Ann Anderson

Michael Beck

Kurt Benirschke, M.D.

Charles V. Berwanger

Sandra Ciallella

Janie DeCelles

Thomas DiBenedetto

Sam M. Duran

James Hubbell

James Peugh

Joan Embery and Duane Pillsbury

M. Lea Rudee, Ph.D.

February 7, 2003

Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

Re: The San Diego River Park - Lakeside Conservancy

Dear Mr. Hannigan:

The San Diego River Park - Lakeside Conservancy is a duly formed nonprofit public benefit corporation organized under the California Corporations Code Title 1, Division 2, Part 2 - Nonprofit Public Benefit Corporation Law. This corporation is organized and operated exclusively for charitable purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code of 1986.

As such, they are able to enter into a grant agreement with the State of California if their grant application to the Flood Protection Corridor Program is funded.

Sincerely,



Sandra Ciallella
Attorney at Law

McDOUGAL • LOVE • ECKIS • SMITH & BOEHMER

ATTORNEYS AT LAW

A Professional Corporation

OF COUNSEL:
LeRoy W. Knutson, A.P.C.

Lynn R. McDougal
S. Michael Love*
Stephen M. Eckis
Tamara A. Smith
Steven E. Boehmer
Morgan L. Foley
Kirk H. Riley**
James P. Lough
Heather H. Henderson
Anthony J. Boucek

460 North Magnolia, Drawer 1466
El Cajon, California 92022-1466
(619) 440-4444
FAX (619) 440-4907

*Certified Legal Specialist, Family Law
**Certified Legal Specialist, Taxation Law
State Bar of California Board of Legal Specialization

February 13, 2003

Thomas M. Hannigan, Director
CALIFORNIA DEPARTMENT OF WATER RESOURCES
P.O. Box 942836
Sacramento CA 94326

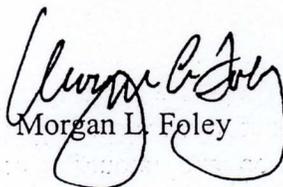
Re: Riverview Water District; San Diego River Park – Lakeside Conservancy

Dear Mr. Hannigan:

This office serves as the office of general legal counsel to the Riverview Water District (the "District"), a California Water District organized and existing pursuant to the California Water District Law (California Water Code sections 34000 *et seq.*) (the "Law"). The District is a co-applicant for certain grants, along with the San Diego River Park – Lakeside Conservancy, to seek funding for the restoration and remediation of a portion of the San Diego River located within District boundaries.

Under section 35406 of the Law the District is authorized to execute all contracts and other documents necessary to carry out the powers and purposes of the District. This would include any grant agreements with the State of California, upon approval of the Board of Directors for the District, should the pending grant application to the Flood Protection Corridor Program be approved for funding.

Very truly yours,


Morgan L. Foley

MLF:hs

cc: Board of Directors
Jeanne Swaringen, General Manager

JUL - 5 2001

BILL JONES, Secretary of State

ARTICLES OF INCORPORATION
OF

THE SAN DIEGO RIVER PARK-
LAKESIDE SANTEE CONSERVANCY

1. The name of this corporation is:

The San Diego River Park – Lakeside Santee Conservancy

2. (A) This corporation is a nonprofit public benefit corporation and is not organized for the private gain of any person. It is organized under the Nonprofit Public Benefit Corporation Law for charitable purposes.

(B) The specific purpose of this corporation is to work to establish a linear river park along the Lakeside segment of the Upper San Diego River, by means of (1) fundraising for and managing various recreational facilities, (2) purchasing and restoring river habitat, and (3) developing water quality and pollution control plans.

3. The name in the State of California of the corporation's initial agent for service of process is:

Deborah Jones
11682 Cheryl Ridge Ct.
San Diego, CA 92126

4. (A) This corporation is organized and operated exclusively for charitable purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code of 1986 or the corresponding provision of any future United States internal revenue law.

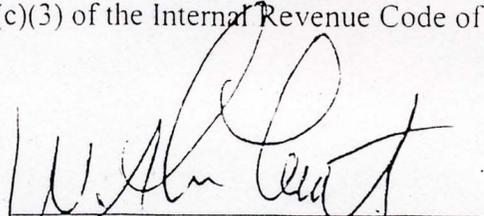
(B) Notwithstanding any other provisions in these articles, this corporation shall not carry on any other activities not permitted to be carried on (1) by a corporation exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code of 1986 or the corresponding provision of any future United States internal revenue law, or (2) by a corporation, contributions to which are deductible under 170(c)(2) of the Internal Revenue Code of 1986 or the corresponding provision of any future United States internal revenue law.

(C) No substantial part of the activities of this corporation shall consist of carrying on propaganda, or otherwise attempting to influence legislation, except as provided in Section 501(h) of the Internal Revenue Code of 1986, and this corporation shall not participate in or intervene in any political campaign (including publishing or distribution of statements) on behalf of or in opposition to any candidate for public office.

5. The property of this corporation is irrevocably dedicated to charitable purposes and no part of the net income or assets of this corporation shall ever inure to the benefit of any director, officer or member thereof or to the benefit of any private person.

Upon the dissolution or winding up of the corporation, its assets remaining after payment, or provision for payment, of all debts and liabilities of this corporation shall be distributed to a non-profit fund, foundation, corporation or other organization (or organizations) organized and operated exclusively for charitable purposes and which has established its tax exempt status under Section 501(c)(3) of the Internal Revenue Code of 1986.

7/2/01
Date


W. Alan Lautanen

**CERTIFICATE OF AMENDMENT
OF
ARTICLES OF INCORPORATION**

The undersigned certifies that:

1. He is the sole incorporator of The San Diego River Park – Lakeside Santee Conservancy, a California corporation.

2. Article 1 of the Articles of Incorporation of this corporation is amended to read as follows:

“The name of this corporation is: The San Diego River Park – Lakeside Conservancy.”

3. Article 2(B) of the Articles of Incorporation of this corporation is amended to read as follows:

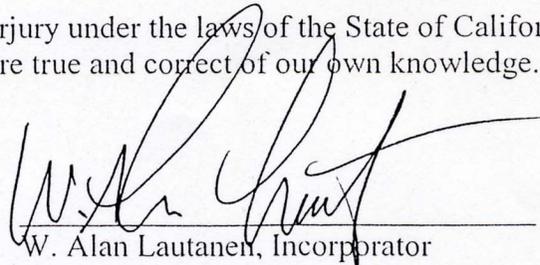
“The specific purpose of this corporation is to work to establish a linear river park along the Lakeside segment of the Upper San Diego River by means of (1) fundraising for and managing various river park amenities and facilities, (2) purchasing and restoring the river habitat, and (3) developing water quality and pollution control plans.”

4. No directors were named in the original Articles of Incorporation and none have been elected.

5. The corporation has no members.

I further declare under penalty of perjury under the laws of the State of California that the matters set forth in this certificate are true and correct of our own knowledge.

Date: 10/8/01



W. Alan Lautanen, Incorporator

INTERNAL REVENUE SERVICE
P. O. BOX 2508
CINCINNATI, OH 45201

DEPARTMENT OF THE TREASURY

Date: **MAY 23 2002**

THE SAN DIEGO RIVER PARK-LAKESIDE
CONSERVANCY
C/O W ALAN LAUTANEN
701 B ST STE 1255
SAN DIEGO, CA 92101

Employer Identification Number:
91-2156461
DLN:
17053332017031
Contact Person:
HENRY F SHAMBURGER ID# 31472
Contact Telephone Number:
(877) 829-5500
Accounting Period Ending:
December 31
Foundation Status Classification:
509(a)(1)
Advance Ruling Period Begins:
July 5, 2001
Advance Ruling Period Ends:
December 31, 2005
Addendum Applies:
No

Dear Applicant:

Based on information you supplied, and assuming your operations will be as stated in your application for recognition of exemption, we have determined you are exempt from federal income tax under section 501(a) of the Internal Revenue Code as an organization described in section 501(c)(3).

Because you are a newly created organization, we are not now making a final determination of your foundation status under section 509(a) of the Code. However, we have determined that you can reasonably expect to be a publicly supported organization described in sections 509(a)(1) and 170(b)(1)(A)(vi).

Accordingly, during an advance ruling period you will be treated as a publicly supported organization, and not as a private foundation. This advance ruling period begins and ends on the dates shown above.

Within 90 days after the end of your advance ruling period, you must send us the information needed to determine whether you have met the requirements of the applicable support test during the advance ruling period. If you establish that you have been a publicly supported organization, we will classify you as a section 509(a)(1) or 509(a)(2) organization as long as you continue to meet the requirements of the applicable support test. If you do not meet the public support requirements during the advance ruling period, we will classify you as a private foundation for future periods. Also, if we classify you as a private foundation, we will treat you as a private foundation from your beginning date for purposes of section 507(d) and 4940.

Grantors and contributors may rely on our determination that you are not a private foundation until 90 days after the end of your advance ruling period. If you send us the required information within the 90 days, grantors and contributors may continue to rely on the advance determination until we make

Letter 1045 (DO/CG)

THE SAN DIEGO RIVER PARK-LAKESIDE

a final determination of your foundation status.

If we publish a notice in the Internal Revenue Bulletin stating that we will no longer treat you as a publicly supported organization, grantors and contributors may not rely on this determination after the date we publish the notice. In addition, if you lose your status as a publicly supported organization, and a grantor or contributor was responsible for, or was aware of, the act or failure to act, that resulted in your loss of such status, that person may not rely on this determination from the date of the act or failure to act. Also, if a grantor or contributor learned that we had given notice that you would be removed from classification as a publicly supported organization, then that person may not rely on this determination as of the date he or she acquired such knowledge.

If you change your sources of support, your purposes, character, or method of operation, please let us know so we can consider the effect of the change on your exempt status and foundation status. If you amend your organizational document or bylaws, please send us a copy of the amended document or bylaws. Also, let us know all changes in your name or address.

As of January 1, 1984, you are liable for social security taxes under the Federal Insurance Contributions Act on amounts of \$100 or more you pay to each of your employees during a calendar year. You are not liable for the tax imposed under the Federal Unemployment Tax Act (FUTA).

Organizations that are not private foundations are not subject to the private foundation excise taxes under Chapter 42 of the Internal Revenue Code. However, you are not automatically exempt from other federal excise taxes. If you have any questions about excise, employment, or other federal taxes, please let us know.

Donors may deduct contributions to you as provided in section 170 of the Internal Revenue Code. Bequests, legacies, devises, transfers, or gifts to you or for your use are deductible for Federal estate and gift tax purposes if they meet the applicable provisions of sections 2055, 2106, and 2522 of the Code.

Donors may deduct contributions to you only to the extent that their contributions are gifts, with no consideration received. Ticket purchases and similar payments in conjunction with fundraising events may not necessarily qualify as deductible contributions, depending on the circumstances. Revenue Ruling 67-246, published in Cumulative Bulletin 1967-2, on page 104, gives guidelines regarding when taxpayers may deduct payments for admission to, or other participation in, fundraising activities for charity.

You are not required to file Form 990, Return of Organization Exempt From Income Tax, if your gross receipts each year are normally \$25,000 or less. If you receive a Form 990 package in the mail, simply attach the label provided, check the box in the heading to indicate that your annual gross receipts are normally \$25,000 or less, and sign the return. Because you will be treated as a public charity for return filing purposes during your entire advance ruling period, you should file Form 990 for each year in your advance ruling period

THE SAN DIEGO RIVER PARK-LAKESIDE

that you exceed the \$25,000 filing threshold even if your sources of support do not satisfy the public support test specified in the heading of this letter.

If a return is required, it must be filed by the 15th day of the fifth month after the end of your annual accounting period. A penalty of \$20 a day is charged when a return is filed late, unless there is reasonable cause for the delay. However, the maximum penalty charged cannot exceed \$10,000 or 5 percent of your gross receipts for the year, whichever is less. For organizations with gross receipts exceeding \$1,000,000 in any year, the penalty is \$100 per day per return, unless there is reasonable cause for the delay. The maximum penalty for an organization with gross receipts exceeding \$1,000,000 shall not exceed \$50,000. This penalty may also be charged if a return is not complete. So, please be sure your return is complete before you file it.

You are not required to file federal income tax returns unless you are subject to the tax on unrelated business income under section 511 of the Code. If you are subject to this tax, you must file an income tax return on Form 990-T, Exempt Organization Business Income Tax Return. In this letter we are not determining whether any of your present or proposed activities are unrelated trade or business as defined in section 513 of the Code.

You are required to make your annual information return, Form 990 or Form 990-EZ, available for public inspection for three years after the later of the due date of the return or the date the return is filed. You are also required to make available for public inspection your exemption application, any supporting documents, and your exemption letter. Copies of these documents are also required to be provided to any individual upon written or in person request without charge other than reasonable fees for copying and postage. You may fulfill this requirement by placing these documents on the Internet. Penalties may be imposed for failure to comply with these requirements. Additional information is available in Publication 557, Tax-Exempt Status for Your Organization, or you may call our toll free number shown above.

You need an employer identification number even if you have no employees. If an employer identification number was not entered on your application, we will assign a number to you and advise you of it. Please use that number on all returns you file and in all correspondence with the Internal Revenue Service.

If we said in the heading of this letter that an addendum applies, the addendum enclosed is an integral part of this letter.

Because this letter could help us resolve any questions about your exempt status and foundation status, you should keep it in your permanent records.

We have sent a copy of this letter to your representative as indicated in your power of attorney.

THE SAN DIEGO RIVER PARK-LAKESIDE

If you have any questions, please contact the person whose name and telephone number are shown in the heading of this letter.

Sincerely yours,

A handwritten signature in black ink that reads "Steven T. Miller". The signature is written in a cursive style with a large, prominent "S" and "M".

Steven T. Miller
Director, Exempt Organizations

Enclosure(s) : _____
Form 872-C

Charitable Contributions - Substantiation and Disclosure Requirements

UNDER THE NEW LAW, CHARITIES WILL NEED TO PROVIDE NEW KINDS OF INFORMATION TO DONORS. Failure to do so may result in denial of deductions to donors and the imposition of penalties on charities.

Legislation signed into law by the President on August 10, 1993, contains a number of significant provisions affecting tax-exempt charitable organizations described in section 501 (c)(3) of the Internal Revenue Code. These provisions include: (1) new substantiation requirements for donors, and (2) new public disclosure requirements for charities (with potential penalties for failing to comply). Additionally, charities should note that donors could be penalized by loss of the deduction if they fail to substantiate. **THE SUBSTANTIATION AND DISCLOSURE PROVISIONS APPLY TO CONTRIBUTIONS MADE AFTER DECEMBER 31, 1993.**

Charities need to familiarize themselves with these tax law changes in order to bring themselves into compliance. This Publication alerts you to the new provisions affecting tax-exempt charitable organizations. Set forth below are brief descriptions of the new law's key provisions. The Internal Revenue Service plans to provide further guidance in the near future.

Donor's Substantiation Requirements

Documenting Certain Charitable Contributions. — Beginning January 1, 1994, no deduction will be allowed under section 170 of the Internal Revenue Code for any charitable contribution of \$250 or more unless the donor has contemporaneous written substantiation from the charity. In cases where the charity has provided goods or services to the donor in exchange for making the contribution, this contemporaneous written acknowledgement must include a good faith estimate of the value of such goods or services. Thus, taxpayers may no longer rely solely on a cancelled check to substantiate a cash contribution of \$250 or more.

The substantiation must be "contemporaneous." That is, it must be obtained by the donor no later than the date the donor actually files a return for the tax year in which the contribution was made. If the return is filed after the due date or extended due date, then the substantiation must have been obtained by the due date or extended due date.

The responsibility for obtaining this substantiation lies with the donor, who must request it from the charity. The charity is not required to record or report this information to the IRS on behalf of donors.

The legislation provides that substantiation will not be required if, in accordance with regulations prescribed by the Secretary, the charity reports directly to the IRS the information required to be provided in the written substantiation. At present, there are no regulations establishing procedures for direct reporting by charities to the IRS of charitable contributions made in 1994. Consequently, charities and donors should be prepared to provide/obtain the described substantiation for 1994 contributions of \$250 or more.

There is no prescribed format for the written acknowledgement. For example, letters, postcards or computer-generated forms may be acceptable. The acknowledgement does not have to include the donor's social security or tax identification number. It must, however, provide sufficient information to substantiate the amount of the deductible contribution. The acknowledgement should note the amount of any cash contribution. However, if the donation is in the form of property, then the acknowledgement must describe, but need not value, such property. Valuation of the donated property is the responsibility of the donor.

The written substantiation should also note whether the donee organization provided any goods or services in consideration, in whole or in part, for the contribution and, if so, must provide a description and good-faith estimate of the value of the goods or services. In the new law these are referred to as "quid pro quo contributions."

Please note that there is a new law requiring charities to furnish disclosure statements to donors for such quid pro quo donations in excess of \$75. This is addressed in the next section regarding Disclosure By Charity.

If the goods or services consist entirely of intangible religious benefits, the statement should indicate this, but the statement need not describe or provide an estimate of the value of these benefits. "Intangible religious benefits" are also discussed in the following section on Disclosure By Charity. If, on the other hand, the donor received nothing in return for the contribution, the written substantiation must so state.

The present law remains in effect that, generally, if the value of an item or group of like items exceeds \$5,000, the donor must obtain a qualified appraisal and submit an appraisal summary with the return claiming the deduction.

The organization may either provide separate statements for each contribution of \$250 or more from a taxpayer, or furnish periodic statements substantiating contributions of \$250 or more.

Separate payments are regarded as independent contributions and are not aggregated for purposes of measuring the \$250 threshold. However, the Service is authorized to establish anti-abuse rules to prevent avoidance of the substantiation requirement by taxpayers writing separate smaller checks on the same date.

If donations are made through payroll deductions, the deduction from each paycheck is regarded as a separate payment.

A charity that knowingly provides false written substantiation to a donor may be subject to the penalties for aiding and abetting an understatement of tax liability under section 6701 of the Code.

Disclosure by Charity of Receipt of Quid Pro Quo Contribution

Beginning January 1, 1994, under new section 6115 of the Internal Revenue Code, a charitable organization must provide a written disclosure statement to donors who make a payment, described as a "quid pro quo contribution," in excess of \$75. This requirement is separate from the written substantiation required for deductibility purposes as discussed above. While, in certain circumstances, an organization may be able to meet both requirements with the same written document, an organization must be careful to satisfy the section 6115 written disclosure statement requirement in a timely manner because of the penalties involved.

A quid pro quo contribution is a payment made partly as a contribution and partly for goods or services provided to the donor by the charity. An example of a quid pro quo contribution is where the donor gives a charity \$100 in consideration for a concert ticket valued at \$40. In this example, \$60 would be deductible. Because the donor's payment (quid pro quo contribution) exceeds \$75, the disclosure statement must be furnished, even though the deductible amount does not exceed \$75.

Separate payments of \$75 or less made at different times of the year for separate fund-raising events will not be aggregated for purposes of the \$75 threshold. However, the Service is authorized to develop anti-abuse rules to prevent avoidance of this disclosure requirement in situations such as the writing of multiple checks for the same transaction.

The required written disclosure statement must:

(1) inform the donor that the amount of the contribution that is de-

Consent Fixing Period of Limitation Upon Assessment of Tax Under Section 4940 of the Internal Revenue Code

(Rev. September 1998)

Department of the Treasury
Internal Revenue Service

(See instructions on reverse side.)

To be used with
Form 1023. Submit
in duplicate.

Under section 6501(c)(4) of the Internal Revenue Code, and as part of a request filed with Form 1023 that the organization named below be treated as a publicly supported organization under section 170(b)(1)(A)(vi) or section 509(a)(2) during an advance ruling period,

THE SAN DIEGO RIVER PARK - LAKESIDE CONSERVANCY

(Exact legal name of organization as shown in organizing document)

701 B ST., STE. 1255, SAN DIEGO, CA 92101

(Number, street, city or town, state, and ZIP code)

and the

District Director of
Internal Revenue, or
Assistant
Commissioner
(Employee Plans and
Exempt Organizations)

consent and agree that the period for assessing tax (imposed under section 4940 of the Code) for any of the 5 tax years in the advance ruling period will extend 8 years, 4 months, and 15 days beyond the end of the first tax year.

However, if a notice of deficiency in tax for any of these years is sent to the organization before the period expires, the time for making an assessment will be further extended by the number of days the assessment is prohibited, plus 60 days.

Ending date of first tax year **DECEMBER 31, 2001**
(Month, day, and year)

Name of organization (as shown in organizing document)	Date
THE SAN DIEGO RIVER PARK, LAKESIDE SANTEE CONSERVANCY	11/20/01
Officer or trustee having authority to sign	Type or print name and title
Signature ▶ <i>W. Alan Lautanen</i>	W. ALAN LAUTANEN, ATTORNEY
For IRS use only	
District Director or Assistant Commissioner (Employee Plans and Exempt Organizations)	Date
Steven T. Miller Director, Exempt Organization	MAY 23 2002

By ▶ *Kenneth Biff* **Group Manager**



SAN DIEGO RIVER PARK – LAKESIDE CONSERVANCY

Per November 2002

Board of Directors

Chair - Michael Beck. Mr. Beck is the San Diego Director of the Endangered Habitats League and acts as Government Liaison for the Conservancy. Mr. Beck coordinates with the wildlife and regulatory agencies, participates in grant development, mitigation, and other funding proposals, and helps guide project development.

Vice Chair - Bruce Robertson. Mr. Robertson is a small business owner and the President of the Eucalyptus Hills Landowners Association. He, with his wife Sally Taylor, has been actively involved in bringing a river park to the Lakeside community for over twenty years. He serves the board as Community Liaison.

Treasurer - Carol Leighty, Ed.D. Dr. Leighty is the Superintendent of the Lakeside School District and acts as Education Director for the Conservancy. First Phase goals include initiation of a school district environmental education and restoration project for the river park..

Secretary - Betty McMillen. Ms. McMillen is most notably past three-term President of the Lakeside Historical Society and a member of Supervisor Jacob's Lakeside Revitalization Committee. She also is active in many community groups, including the Maine Avenue Revitalization Association (MARA) and Street Dance Association both of which she is a co-founder. She writes the "Around Lakeside" column for the East County Californian newspaper. Ms. McMillen heads the Conservancy's Heritage Park efforts.

Jo Ann Anderson. Ms. Anderson is a retired Vice President at the Scripps Foundation for Medicine and Science. She has 35 years of experience in academic and nonprofit management and development at UCSD School of Medicine and at the Scripps Foundation for Medicine and Science. She is also Executive Director of the San Diego River Park Foundation. She serves the board as Fundraising Advisor.

Larry Campbell. Mr. Campbell is a Senior Right of Way Agent and Environmental Analyst at Helix Water District. He has experience in real estate and easement acquisition, preparation of EIRs and Habitat and Groundwater Plans, as well as project management. Mr. Campbell is an East County native and he and his family have lived in Lakeside for the past 22 years. He serves the board as a real property specialist.

Thomas DiBenedetto. Mr. DiBenedetto is a private developer and has extensive experience in land development and business operations. He is the Conservancy's Business and Planning Advisor. Mr. DiBenedetto is presently assisting in the ball fields acquisition and development, south river-lands acquisition, and is business liaison with landowners in the project area.

Duane Pillsbury. Mr. Pillsbury is co-owner of Pillsbury Ranch, with his wife Joan Embery, in rural Lakeside. The 50-acre ranch and its owners are dedicated to animals, including show horses, wildlife ambassadors, native wildlife, and personal pets. The ranch frequently hosts fundraisers for worthwhile charities. Mr. Pillsbury is the Conservancy's link to Lakeside's equestrian community.

Tony Pulli. Mr. Pulli is a CPA with his own accounting firm. He brings to the board a wealth of experience in financial accounting and planning, as well connections to youth sports organizations in Lakeside as board member of the Lakeside National Little League. He and his family have lived in Lakeside for over 20 years.

Mr. Pulli advises the Board on financial matters and is a liaison to various youth sports organizations in Lakeside.

Gordon Shackelford. Mr. Shackelford, who was raised in Lakeside, is former Chairman of the Lakeside Community Planning Group. Mr. Shackelford acts as Community Liaison for the Conservancy. Mr. Shackelford is a member of the faculty at the Department of Physics at San Diego State University. He serves the board as Community Liaison.

Maryanne Vancio. Ms. Vancio has almost twenty years of trails experience in San Diego County and served as a governor appointee to the California Recreational Trails Committee for five years. Through her experience she has had numerous opportunities with design, construction and development of trail projects throughout the State. Ms. Vancio, a Lakeside resident, is currently working on the Regional Trails Master Plan for the County of San Diego, Parks and Recreation Department. She acts as the Conservancy's Trails Committee Chair.

Staff

Executive Director, Deborah Jones, has a M.A. in Geography with an emphasis in Natural Resources and Environmental Quality from San Diego State University (Class of 2001) and a B.Sc. in Business Administration with an emphasis in Finance and Investments from California State University, Long Beach (Class of 1990). Prior to pursuing a career with an environmental focus to reflect her passion, Deborah gained over 8 years of professional work experience in managerial accounting in the US, the Netherlands, and Germany.

Manager of Programs and Community Outreach, Robin Rierdan, has a M.C.P. in Urban Planning from the Georgia Institute of Technology with specializations in economic development and real estate, and a B.A. from the University of California, San Diego (Revelle College), in Anthropology and Teaching. She is the past director of the State of Nevada's Rural Economic Development Program. She has been active in land preservation projects and issues in Santee and East County for the past six years.

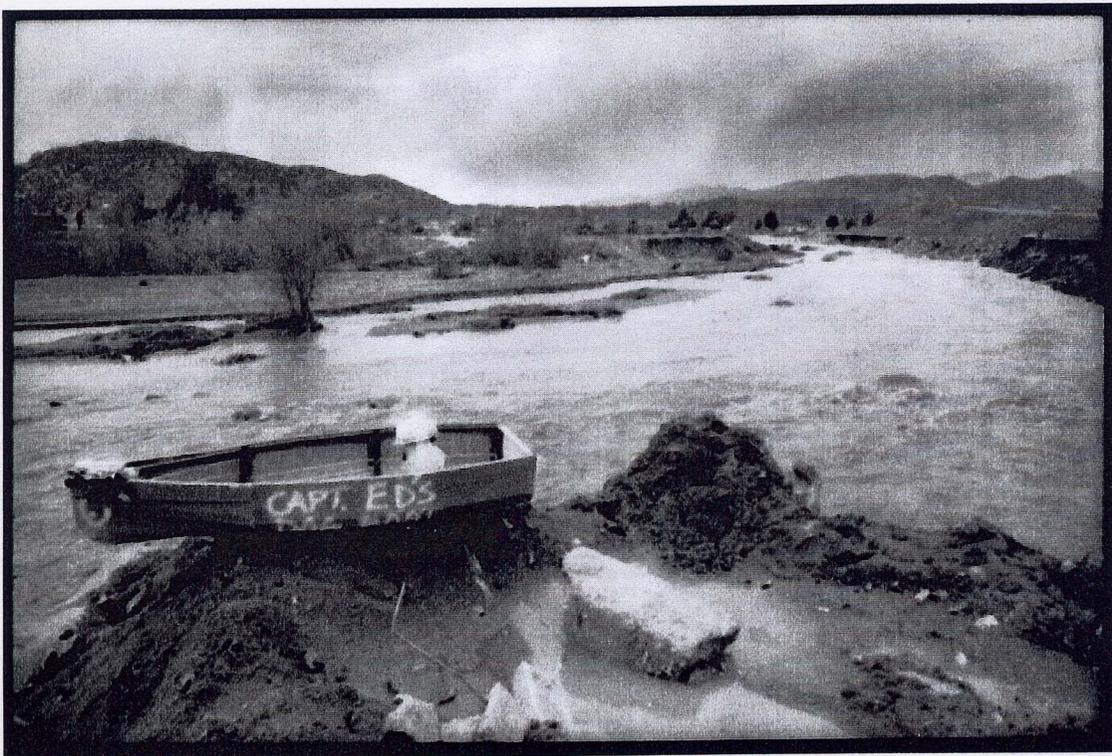
Appendix C
Flood Photos



Flooded lot by Lindo Lake apartments.

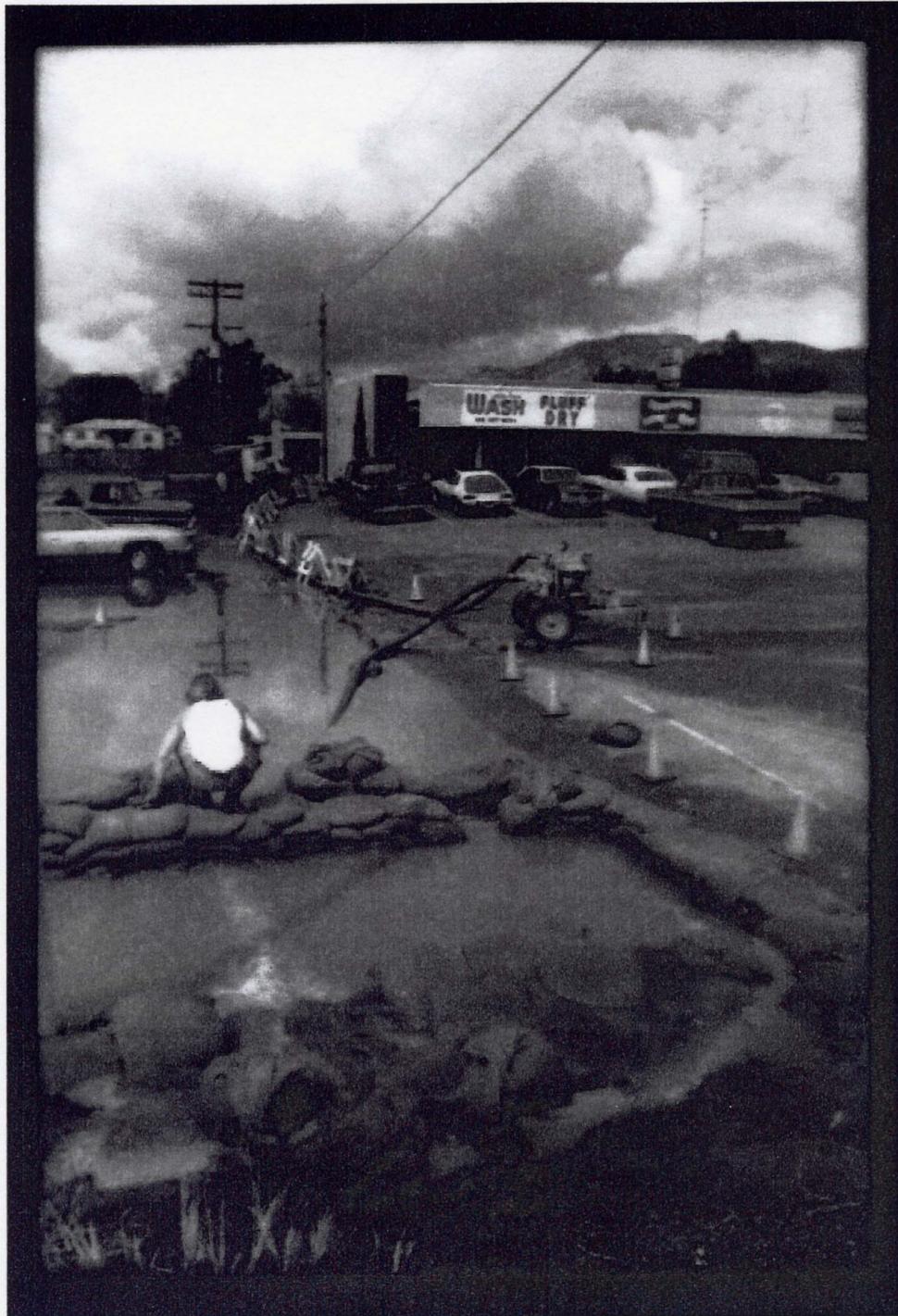
LAKESIDE FLOOD - 1978

Beached boat in the San Diego River



Copyright © 1999 by Peter Nelson

LAKESIDE FLOOD - 1978



One of many sandbag dikes - Wrigley Market @ Lindo Lake.

Copyright ©1992 by Peter Nelson

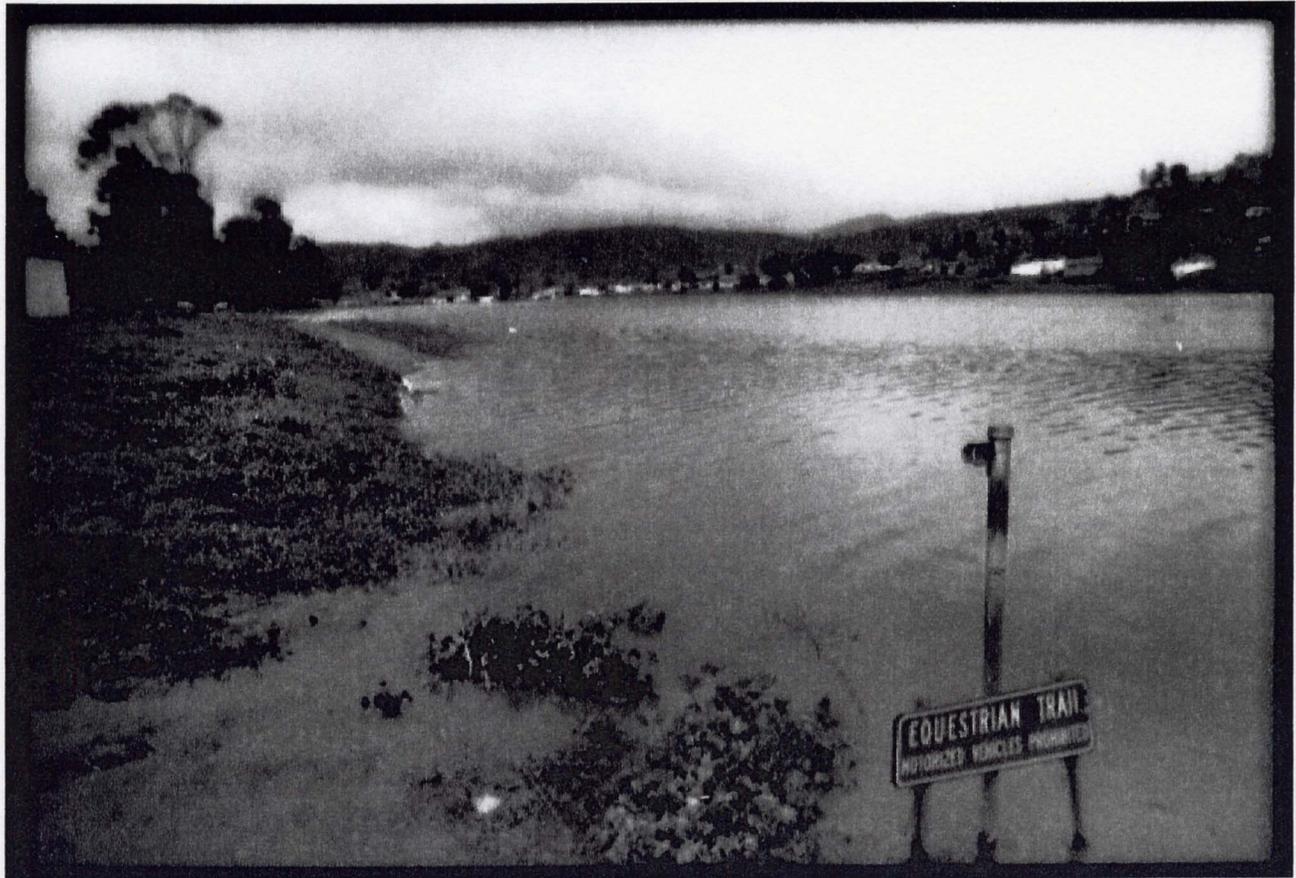


Riverford Road - 1978.
Cleaning up after the Lakeside floods.
Safeway Parking lot - 1980.



Copyright © 1999 by Peter Nelson

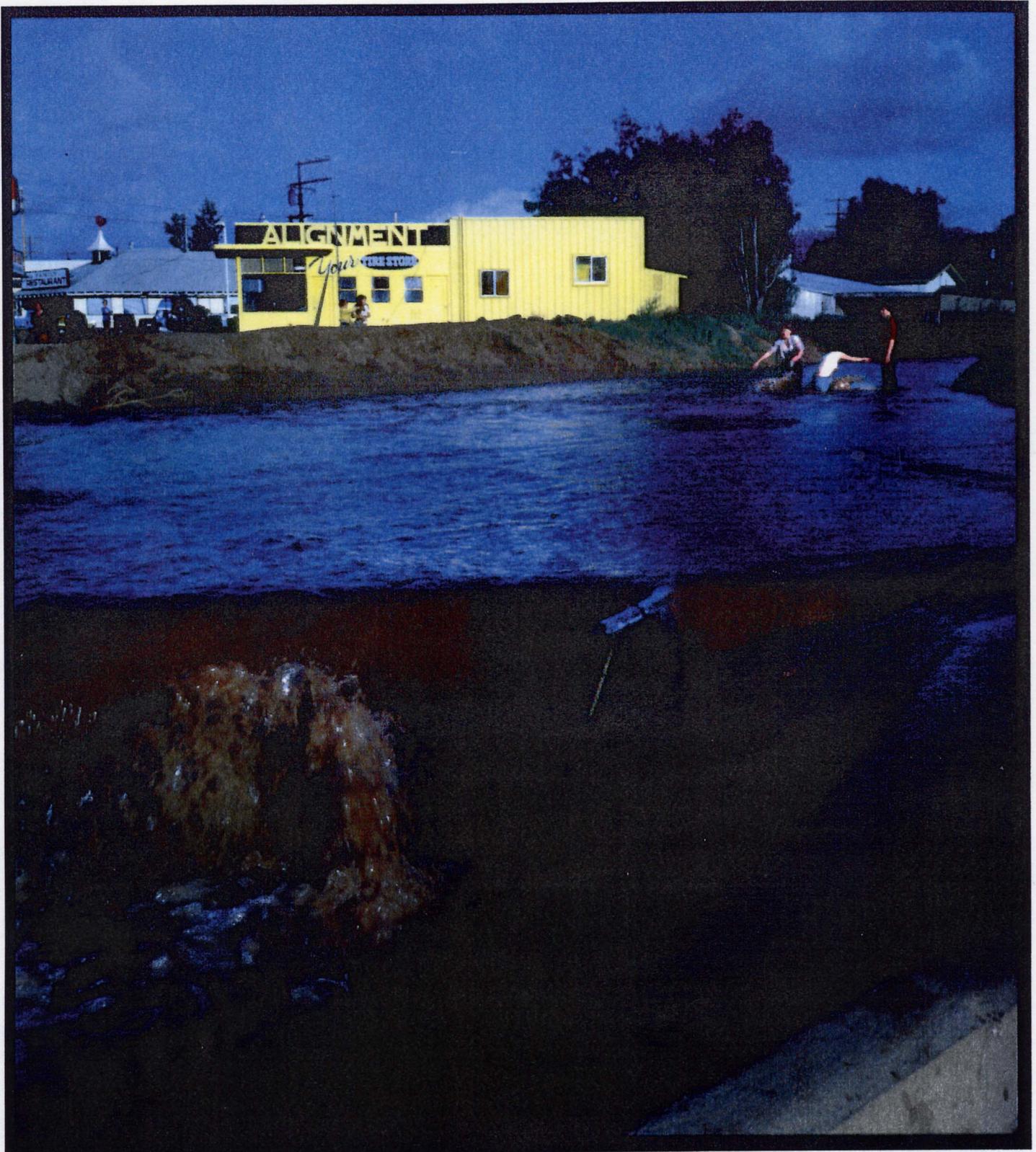
LAKESIDE FLOOD - 1978



Lindo Lake at its fullest in over 20 years.



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LAKESIDE FLOOD - 1980

Copyright © 1999 by Peter Nelson

Kids playing in water flowing over washed out road by Safeway - 1980



Washed out Industry Road.

LAKESIDE FLOOD - 1978

Channel Road.



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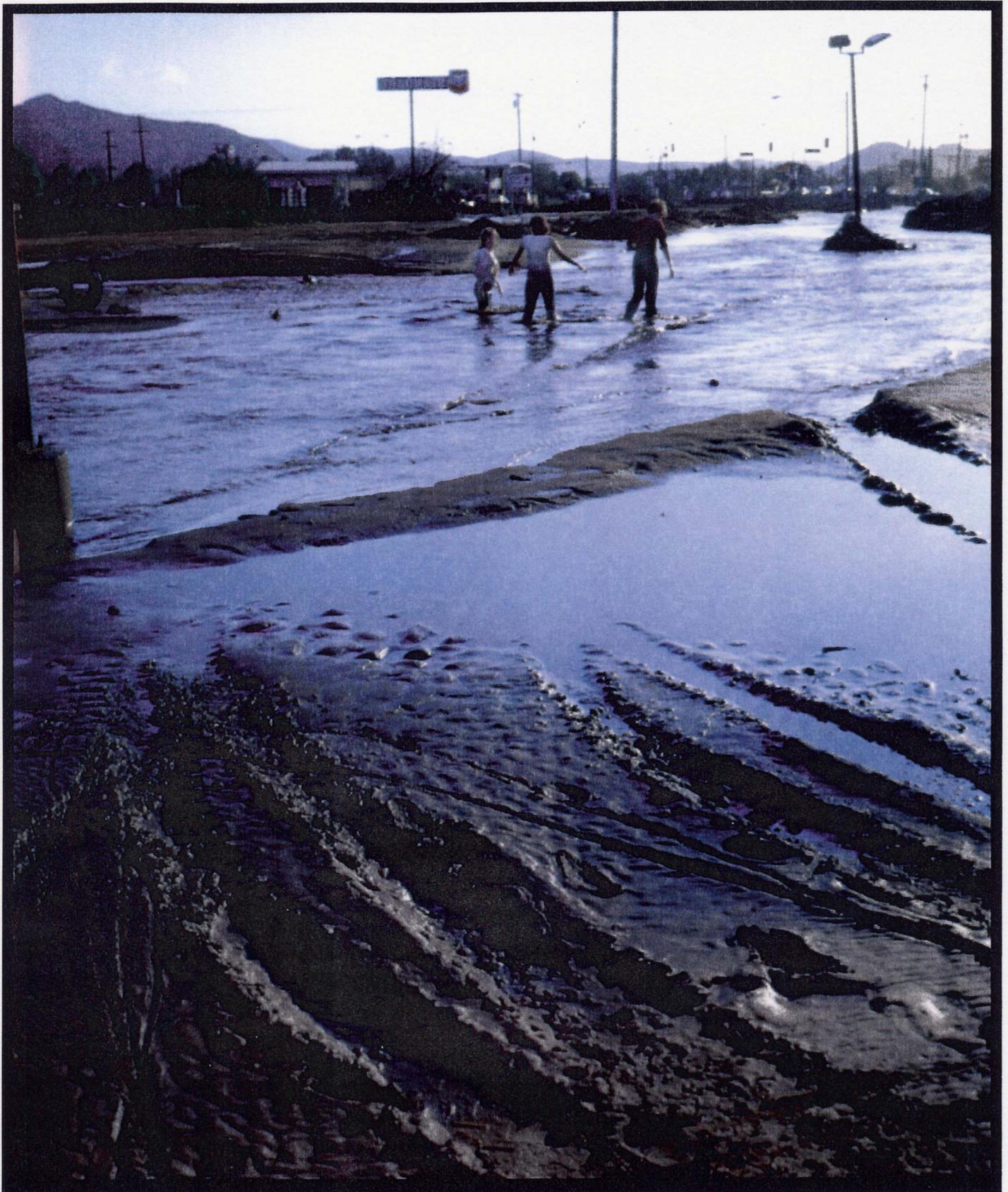
Cars swept away by the flood waters.

LAKESIDE FLOOD -1978

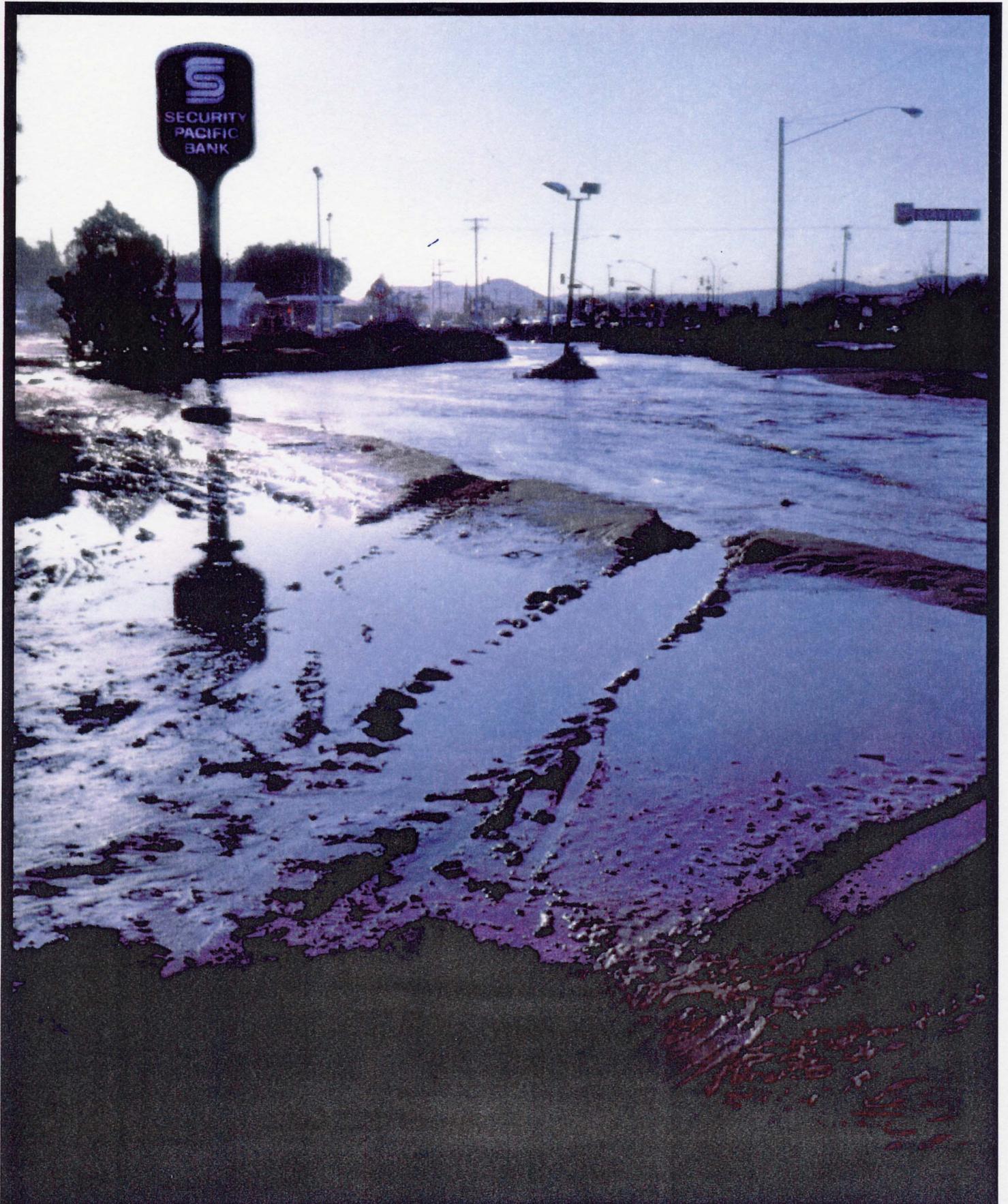
Riverford Road was cut in two.



Copyright © 1999 by Peter Nelson



Safeway parking lot looking SW - 1980 Copyright ©1999 by Peter Nelson



LAKESIDE FLOOD - 1980
Security Pacific Bank Parking lot.

Copyright ©1999 by Peter Nelson

Appendix D
Initial Study and Existing EIR
(The EIR is on a CD and is in the original
hard copy, grant package.)



GARY L. PRYOR
DIRECTOR
(858) 694-2962

County of San Diego

DEPARTMENT OF PLANNING AND LAND USE

5201 RUFFIN ROAD, SUITE B, SAN DIEGO, CALIFORNIA 92123-1666
INFORMATION (858) 694-2960
TOLL FREE (800) 411-0017

SAN MARCOS OFFICE
338 VIA VERA CRUZ - SUITE 201
SAN MARCOS, CA 92068-2620
(760) 471-0730

EL CAJON OFFICE
200 EAST MAIN ST. - SIXTH FLOOR
EL CAJON, CA 92020-3912
(619) 441-4030

February 13, 2003

Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

Re: FLOOD PROTECTION CORRIDOR PROGRAM

Dear Mr. Hannigan:

This document serves as a narrative and references the attached County of San Diego Board of Supervisors certified Environmental Impact Report (Upper San Diego River Improvement Project Environmental Impact Report dated August 2000) to satisfy Section 497.7(a)(10), Application for Grant Funding that require "A complete initial study environmental checklist as required by Section 15063(f), Title, California Code of Registrations, and if available a completed Environmental Impact Report or other environmental documentation as required by CEQA." The San Diego River Park-Lakeside Conservancy's grant proposal to enhance a section of the San Diego River within Lakeside, CA for expansion of the River floodplain, enhancement and creation of riparian and wetland resources to benefit rare, threatened and endangered species, improve water quality, enhance flood protection, and provide recreational and educational uses that respect the fragile ecosystem of the San Diego River, lies is within 552 acre project site analyzed with the Upper San Diego River Improvement Project (USDRIP) environmental impact report (EIR). The USDRIP planning area includes over a 2-mile segment of the San Diego River that traverse through San Diego County ultimately reaching the Pacific Ocean.

The USDRIP EIR certified August 2000 is a Program EIR, pursuant to CEQA Section 15168, that analyzed all potential environmental impacts associated with the proposed channelization and realignment of the San Diego River, continued mining and reclamation activities, and mixed uses that includes recreational, industrial, commercial and residential activities and development. The August 2000 USDRIP EIR contains a completed Initial Study Form and Environmental Analysis Form that includes sites the San Diego River Park-Lakeside

Conservancy proposes to enhance and preserve. The completed Initial Study and Environmental Analysis Forms outlined all environmental resources regulated pursuant to CEQA and identified all Potentially Significant Impacts to environmental resources that required the preparation of the August 2000 USDRIP EIR. Along with other environmental resource, the August 2000 USDRIP EIR analyzed Potentially Significant Impacts to: Transportation/Circulation; Biological Resources; Noise; Public Services; Aesthetics; and Hazards. The USDRIP EIR recognized the need to enhance this portion of the River to control flooding, minimize erosion and bank stabilization, improve water quality, enhance wetland and riparian habitats and provide for the preservation of rare, threatened and endangered species, while planning for mixed uses along the River corridor. The USDRIP EIR analyzed, at the program level, all environmental resources regulated pursuant to CEQA to determine significance, documented existing conditions, established thresholds of significance, and proposed mitigation.

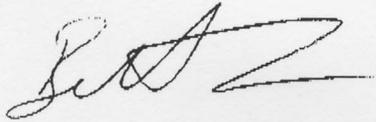
The USDRIP EIR was certified with the environmentally superior alternative that analyzed the USDRIP goals to enhance this segment of the San Diego River and plan for mixed uses along the River corridor. The USDRIP EIR analyzed, at a program level and in limited instances project level, the lands proposed by San Diego River Park-Lakeside Conservancy to be converted for recreational and educational uses, as well as for the preservation of the portion of the River floodplain described within the grant proposal. These lands include the three separate locations that total approximately 126 acres that has been reclaimed and zoned for commercial and industrial uses. All locations identified as being enhanced within the grant proposal are included within the USDRIP EIR. The certified USDRIP EIR provides a program level analysis of the existing conditions. The San Diego River Park-Lakeside Conservancy grant proposal to add to the acquisition of the approximately 126 acre project site has existing condition analyses and will prepare, pursuant to CEQA Section 15162, a supplemental EIR to address modifications to the project description with the certified USDRIP EIR.

While the San Diego River Park-Lakeside Conservancy grant proposal is clearly a benefit to the environment, the project will need to prepare a supplemental EIR to address potentially significant project level impacts to transportation/circulation, hazards, biology, noise and hydrology. However, the San Diego River Park-Lakeside Conservancy proposal is a benefit to the environment based on the fact that the project proposes to remove approximately 45 acres of fill placed from reclamation activities within the River's historic floodplain. Among other actions the project will enhance wetland and riparian resources known to support rare, threatened and endangered species and widen the River's floodplain improving the chronic flooding problems for the area, and improving water quality of the River. These environmentally beneficial uses would occur in areas that are currently zoned for industrial and commercial uses along the River corridor. Furthermore, funding and implementation of the grant

proposal would be a beneficial component of the existing County of San Diego Multiple Species Conservation Program (MSCP) that regulates biological resources and implements a regional plan for the movement and habitation on a multiple species level.

Please feel free to contact me at (858) 694-3685 with any questions regarding the USDRIP EIR or this narrative.

Sincerely,

A handwritten signature in black ink, appearing to read "Brett S. Solomon". The signature is fluid and cursive, with a large initial "B" and "S".

Brett S. Solomon, Environmental Management Specialist II
Department of Planning and Land Use

Appendix E
Photos of Site, including Major Constriction

Constriction Approximately 30 feet wide



The constriction of the San Diego River, just east of the Channel Rd. bridge

Cal-Mat Site



Eastern parcel near Channel Rd., looking west. The Hanson Aggregates, future site of the Nature and Cultural Center is on the right.

Cal-Mat Site



Western parcel near the river channel, looking east.

Cal-Mat Site

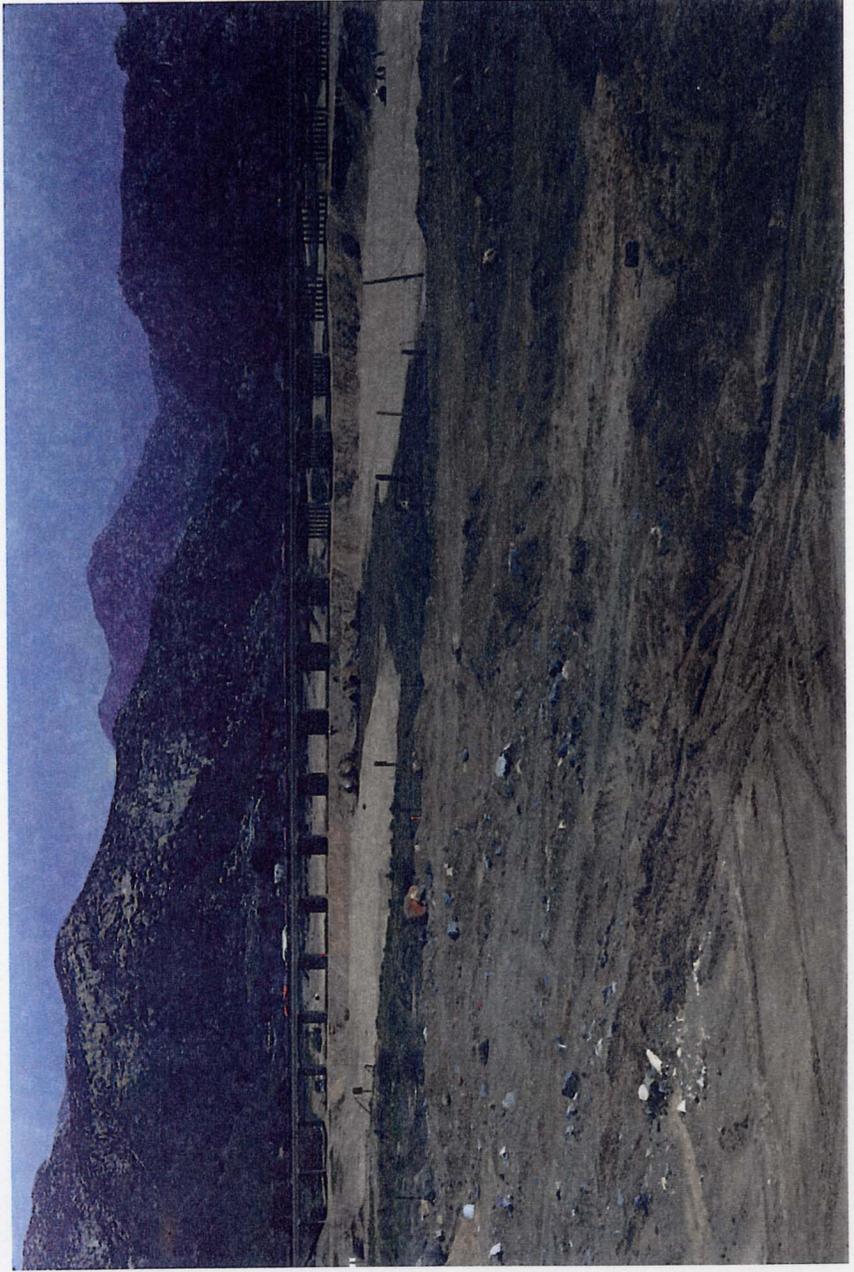


Looking north to the location of the Small Communities Grant project

Cal-Mat Site



Looking north west at the pond from the top of the Cal-Mat pad



Hwy 67 Bridge looking east

1978 Flood

Appendix F
Funding Commitments, Letters from Willing
Sellers and Notification Letters Sent to
Adjacent Landowners

Memorandum

To : AL WRIGHT, Executive Director
Wildlife Conservation Board

Date: October 9, 2002

From: ROBERT C. HIGHT, Director
Department of Fish and Game



Subject: Support for Property Acquisition in San Diego County (Calmat, San Diego River)

South Coast Region staff has reviewed and supports a request by the San Diego River Park-Lakeside Conservancy for \$3 M in grant funds from the Wildlife Conservation Board (WCB) to acquire property within the Multiple Species Conservation Program (MSCP) preserve area. The property (Calmat) is within the Upper San Diego River corridor and continues the archipelago of habitat that forms the Lakeside Linkage, an approved CAPP/Grant area. This acquisition would augment previous habitat purchases in the archipelago that were achieved through joint funding by WCB and the County of San Diego. This request is exempted from Lands Committee review because the property to be acquired is within the MSCP planning area and represents a collaborative process in which the Department is a key participant.

The County of San Diego has identified the Calmat property and other parcels in the Upper San Diego River area property as a priority acquisition. The Calmat property (map attached) comprises 99.62 acres of disturbed, restorable riparian and coastal sage habitats within the Department-approved MSCP preserve system. The property, a former materials extraction site, comprises part of the Upper San Diego River/Lakeside Linkage corridor to the San Vicente/Iron Mountain wildlife preserve area. Acquisition would be consistent with the County of San Diego's MSCP plan and its Ordinance 9462, relating to the Upper San Diego River, which includes measures to assist in the preservation and restoration of the San Diego River. This corridor also has been identified by the Southern California NCCP Managers as a priority acquisition within the MSCP. Also, Governor Davis just signed AB 2156 (Kehoe) that establishes the San Diego River Conservancy and allocates \$12 M for river restoration projects.

This property is part of a regionally significant biological linkage for the MSCP species. Once restored, it is anticipated to function as habitat for the federal and state-listed least Bell's vireo and southwestern willow flycatcher, both are MSCP covered species. Other species that would benefit from restoration of riparian and transitional uplands like coastal sage scrub include the California gnatcatcher, white-tailed kite, northern harrier, tri-colored blackbird, and least bittern.

A purchase offer for the property has been made by the Conservation Fund for \$7.5 M, and agreed to by the landowner. The requested funds are to be combined with other grants and local funding to exercise the offer for the 99.62 acres of Calmat property, which is valued at approximately \$8M. Committed funds to date include an \$800,000 grant from the Coastal Conservancy and \$70,000 in local grants and

donations. Several other grants are being pursued by the Conservancy. The Conservancy and Conservation Fund are fully aware that the WCB funding, if allocated, would require a State-approved appraisal, clear title and hazardous materials conditions, etc. If the WCB grant conditions could not be met, then the funds would revert to the WCB. Also, a local landowner has donated to the Conservancy 25 acres of adjoining land (valued at \$4 M), a portion of which will be restored as riparian habitat.

All planning, fund-raising, and management costs would be assumed by the San Diego River Park-Lakeside Conservancy. The County of San Diego has identified this portion of the river as a focus for preservation. The downstream portion of the river is within the City of San Diego's jurisdiction and its restoration is one of the City's top priorities for conservation. Local representative for the San Diego River Coalition is Mr. Michael Beck, who can be reached at (619) 846-3003.

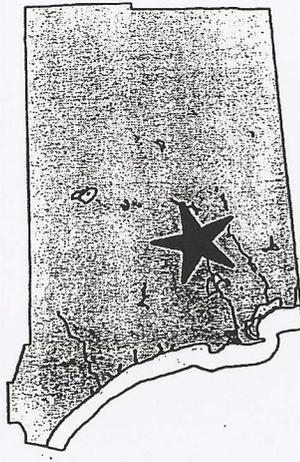
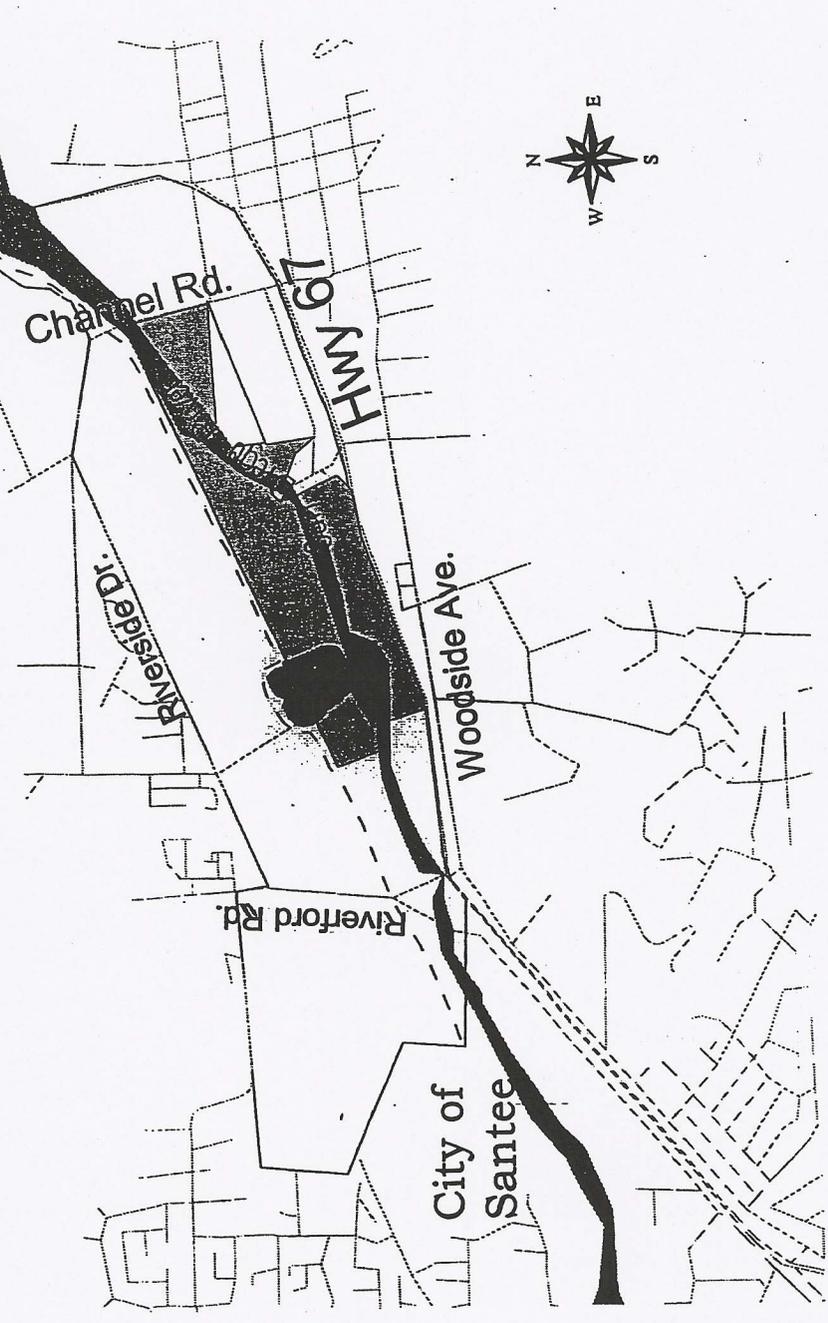
If your staff has any questions about this proposed acquisition, please contact Mr. Bill Tippets, Environmental Program Manager, South Coast Region, at (858) 467-4212.

Attachments

cc: Region 5 Land Acquisition Files (Lakeside/Iron Mountain)
Michael Beck, Endangered Habitats League/SD River Coalition
Barbara Simmons, County of San Diego,
5201 Ruffin Road, Suite P, San Diego 92123

CalMat Acquisition Project Planning Area for the San Diego River Park - Lakeside Conservancy (SHADED AREA currently owned by CalMat/Vulcan)

----- Proposed Trail



Lakeside,
San Diego County



ATTACHMENT 4

CALMPT PROPERTY

APN 394-01-35

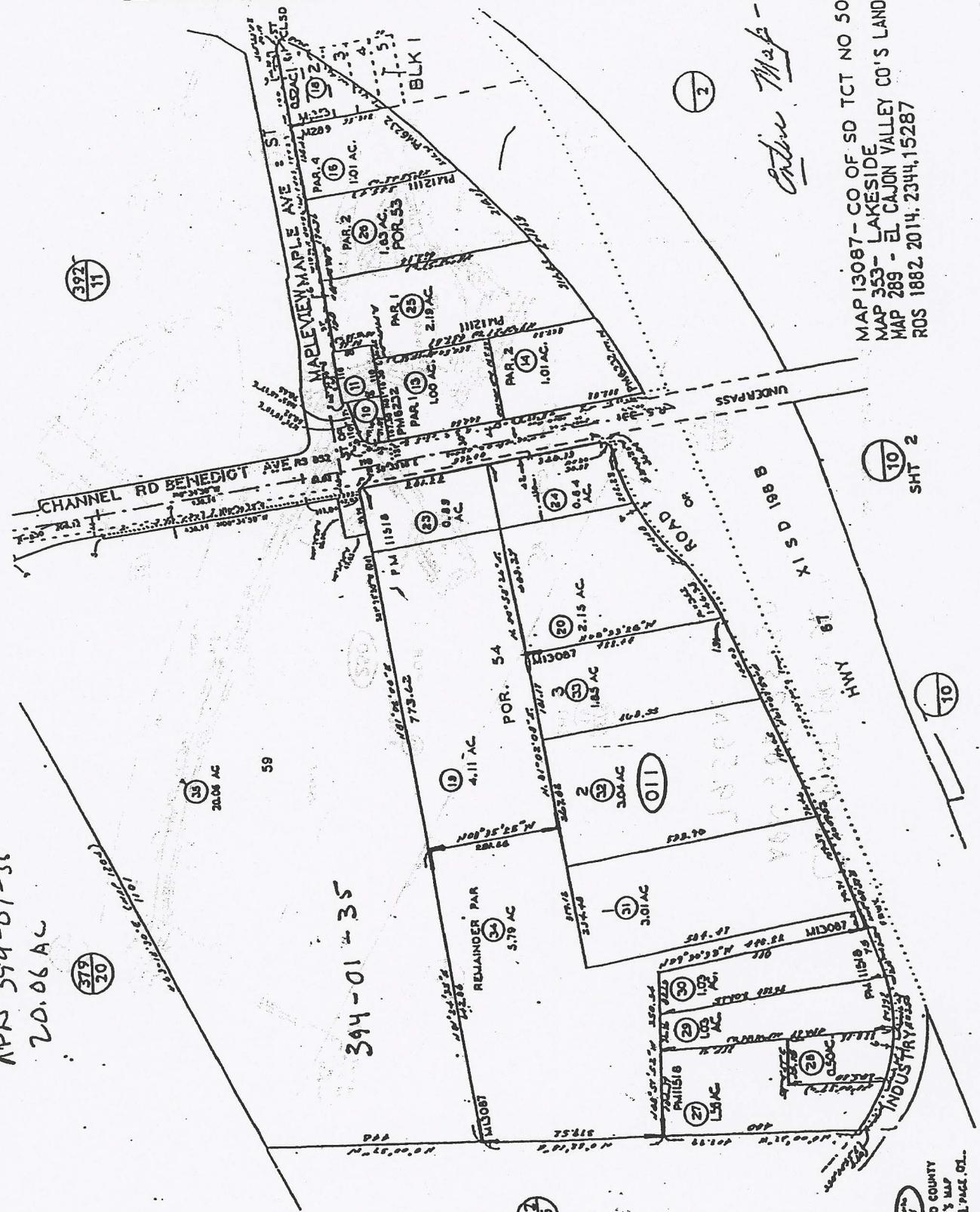
20.06 AC

379
20

392
11

2/18/89 RAG

CHANGES	
EXHIBIT	NEW/REV
A/1	1-5
B/1	1-5
C/1	1-5
D/1	1-5
E/1	1-5
F/1	1-5
G/1	1-5
H/1	1-5
I/1	1-5
J/1	1-5
K/1	1-5
L/1	1-5
M/1	1-5
N/1	1-5
O/1	1-5
P/1	1-5
Q/1	1-5
R/1	1-5
S/1	1-5
T/1	1-5
U/1	1-5
V/1	1-5
W/1	1-5
X/1	1-5
Y/1	1-5
Z/1	1-5



394-01-35

Entire Map - USD RIP

MAP 13087 - CO OF SD TCT NO 5033
 MAP 353 - LAKESIDE
 MAP 289 - EL CAJON VALLEY CO'S LANDS - LOT 59 & POR
 ROS 1882.2014.2344.15287

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCELS MAY NOT CORRELATE WITH LOCAL SUBDIVISION OR BUILDING ORDINANCES.

SAN DIEGO COUNTY
 ASSESSOR'S MAP
 BOOK 3724, PAGE 01.

DIRECTOR'S ACTION REQUEST

To: ROBERT C. HIGHT, Director

Date: September 26, 2002

Via: Ronald Rempel, Deputy Director

Subject: (select one)

- For Director's Signature (on attached memo for WCB)
- Request for Meeting
- For Director's Information
- Request for Executive Team Review
- Other:
- Request for Approval
- Request for Review and Comment
- Request for Director's Participation
- Request for Leadership Team Review

Issue Statement: Request for Wildlife Conservation Board approval to allocate \$3 million toward the purchase of a 100-acre property on the San Diego River. The property is within an approved Natural Community Conservation Program planning area. The San Diego River Park-Lakeside Conservancy is assembling funds to complete a purchase offer on the property and has requested State funding, consistent with State obligations to assist with acquisition of habitat pursuant to the NCCP permit.

Time Factor or Limitations: The property has a purchase offer that will expire by the end of 2002 or early 2003. No commitment has been made to allow the option to be extended, at which time the current landowner could put the property on the open market.

Summary of Implications: The NCCP will potentially lose the opportunity to have this property purchased and included into the regional NCCP reserve lands if the purchase offer is not acted on in a timely period.

Effects on Existing Law or Regulation:

- Legal Office Review
- Legislative Office Review

Estimated Costs: \$3 million grant request.

Author: Bill Tippetts, EPM1/Deputy Regional Manager (Include title of position)	Date: September 26, 2002 Phone: (858) 467-4212
Supervisor/Senior: <i>William E Tippetts</i>	Date: Phone:
Branch Chief/Regional Manager: C. F. Raysbrook <i>C. F. Raysbrook 09/26/02</i>	Date: September 26, 2002 Phone: (858) 467-4210
Deputy Director:	Date:

Concur:

Felix Arteaga for Date: *10-4-02*
Deputy Director - Sonke Mastrup

- Approved
- Received
- Reviewed
- Returned for further work
- Take appropriate action
- Setup meeting with:
- Coordinate With:

Date: _____

Robert C. Hight, Director

**STATE COASTAL CONSERVANCY
PUBLIC MEETING MINUTES**

June 25, 2001
9:30 a.m.

Auditorium
Association of Bay Area Governments
101 Eighth Street
Oakland, California

MEMBERS PRESENT: Gary A. Hernandez (Public Member) (Chairman)
John J. Lormon (Public Member) (Vice-Chairman)
Larry Goldzband (Public Member)
Paul Morabito (Public Member)
Steve Scholl (Designated Representative, Coastal Commission)

OVERSIGHT

LEGISLATORS PRESENT: Reed Addis, representing Assemblyman Fred Keeley

OTHERS PRESENT: Neal Fishman, Deputy Executive Officer
Pat Peterson, Deputy Attorney General

**NAPA SALT MARSH
FEASIBILITY STUDY &
NAPA-SONOMA MARSH
WILDLIFE AREA:**

Nadine Hitchcock and Amy Hutzal of the Conservancy staff presented the Staff Recommendations for these two projects.

Speaking in favor of the Staff Recommendation: Larry Wycoff, representing the Department of Fish and Game; Colonel O'Rourke, representing the U.S. Army Corps of Engineers; Chris Bowles, representing Phil Williams & Associates;

Resolution-

"The State Coastal Conservancy hereby authorizes:

1. Continuation and amendment of the Federal Cost Share Agreement with the U.S. Army Corps of Engineers ("the Corps") for the Napa River Salt Marsh Restoration Feasibility Study;
2. Disbursement of an amount not to exceed one million two hundred twenty-five thousand dollars (\$1,225,000), through the provision of cash payments to the Corps and expenditures for con-

authorization will have a significant effect on the environment as defined in 14 California Code of Regulations Section 15382; and

4. *The proposed project will serve greater than local needs."*

Motion passed by a vote of 4-0. Mr. Goldzband was not present for the vote.

**SAN DIEGO
RIVER PARKWAY:**

Marc Beyeler of the Conservancy staff presented the Staff Recommendation.

Speaking in favor of the Staff Recommendation: Michael Beck, representing the Endangered Habitats League.

Resolution-

"The State Coastal Conservancy hereby approves the San Diego River Parkway-Lakeside NCCP Enhancement Plan, attached to the accompanying staff recommendation as Exhibit 2, and authorizes the disbursement of an amount not to exceed eight hundred thousand dollars (\$800,000) to the County of San Diego to implement the Plan, subject to the following conditions:

1. Prior to the disbursement of funds for pre-acquisition activities, preparation of trail and management planning documents, or habitat restoration, the Executive Officer of the Conservancy shall approve a work program for each of these, including a budget and a timeline and any contractors the County wishes to employ;
2. Funds may be disbursed for the acquisition of interests in any real property within the Enhancement Plan area, upon approval by the Executive Officer of an acquisition work program. Prior to the disbursement of funds for any acquisition, the County shall submit for the review and approval of the Executive Officer all relevant acquisition documents, including the appraisal, agreements of purchase and sale, escrow instructions, hazardous materials assessments and documents of title, and evidence that the County has secured all funding necessary to the acquisition of that property;
3. The properties acquired pursuant to this authorization shall be managed and operated in a manner consistent with the purposes of public access, recreation, habitat restoration and open

space protection, as provided in the San Diego River Parkway-Lakeside NCCP Enhancement Plan;

4. The County shall pay no more than fair market value for any property acquired pursuant to this authorization; and
5. Conservancy funding shall be acknowledged by erecting and maintaining (a) sign(s) within the San Diego River Parkway, which has been reviewed and approved by the Executive Officer of the Conservancy."

Findings-

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with the guidelines and criteria set forth in Chapter 6 of the Public Resources Code (Sections 31251-31270) regarding the enhancement of coastal resources; and
2. The proposed project is consistent with the guidelines and criteria set forth in the Conservancy's Project Selection Criteria and Guidelines adopted on January 24, 2001."

Mr. Lormon recused himself from consideration of this item. Motion passed by a vote of 4-0.

SEAL BEACH OCEAN WATER QUALITY DEBRIS BOOM:

Marc Beyeler of the Conservancy staff presented the Staff Recommendation.

Resolution-

"The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed three hundred thousand dollars (\$300,000) to the City of Seal Beach to undertake planning and design for a Debris Boom as part of the City's Ocean Water Quality Management Plan. This authorization is subject to the condition that prior to the disbursement of any funds, the City of Seal Beach shall submit for the review and approval of the Conservancy's Executive Officer:

1. A work program, including schedule, budget and timeline; and
2. The names of any contractors it intends to use for the project."

Findings-



Coastal
Conservancy

FAX

Fax: 510-286-0470
CALNET fax: 8-541-0470

DATE: 11/15/01

FAX #: (858) 689-8336

TO: Deborah Jones

FROM: Marc Bejeler

PHONE: (510) 286- 4772

TOTAL NUMBER OF PAGES (INCLUDING THIS PAGE): 4

MESSAGE: Deborah. I've attached the first page of the
minutes for June meeting and then the
two pages re: San Diego Press Building. The
entire minutes are 47 pages long.

Best,
Marc

REPLY REQUESTED: NO YES

HARD COPY TO FOLLOW: NO YES

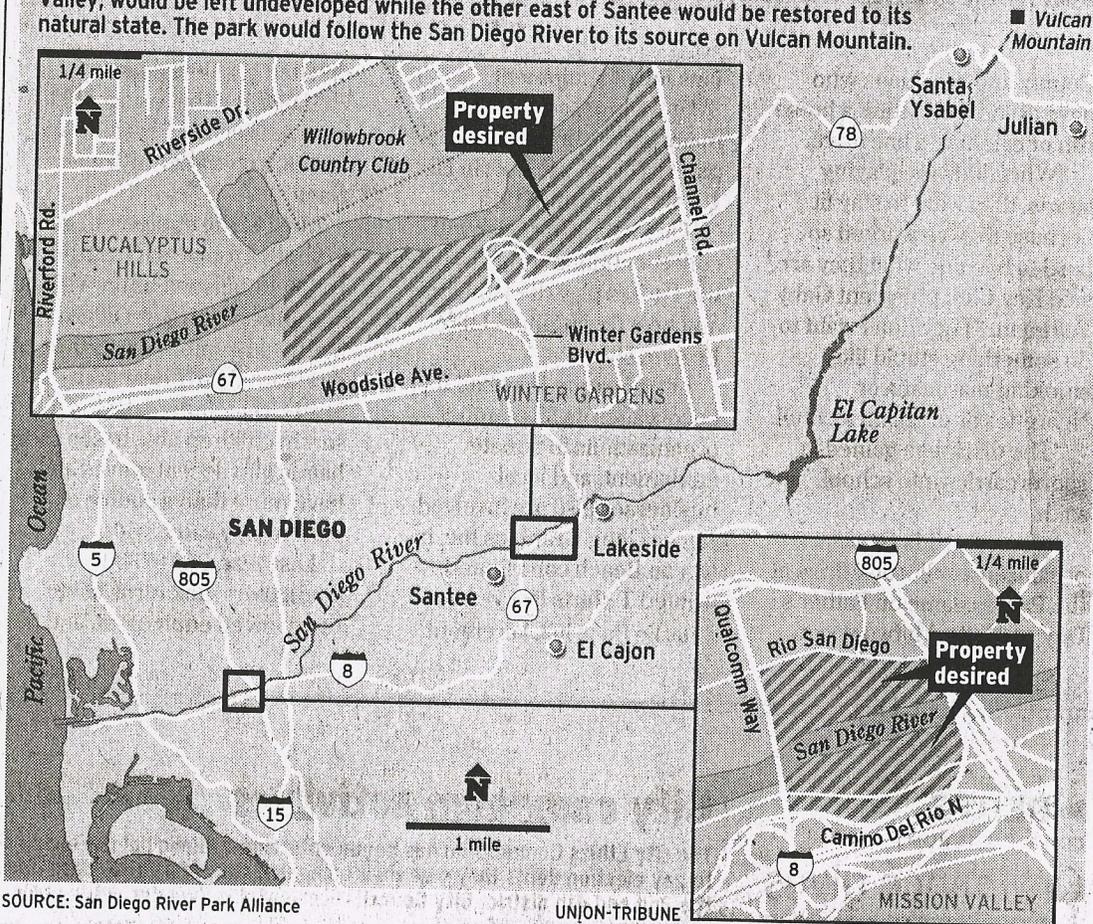
1330 Broadway, 11th Floor
Oakland, California 94612-2530
510-286-1015 Fax: 510-286-0470



Pieces of the puzzle

The San Diego Union-Tribune • Monday, February 10, 2003

Two pieces of the San Diego River Park could be acquired with a state grant. One, in Mission Valley, would be left undeveloped while the other east of Santee would be restored to its natural state. The park would follow the San Diego River to its source on Vulcan Mountain.



SOURCE: San Diego River Park Alliance

UNION-TRIBUNE

San Diego River Park project in line for a boost of \$6 million

Alliance backs state purchase of key parcels

By Ray Huard
STAFF WRITER

Plans to create a swath of open space, parks and trails along the San Diego River received a boost last week with recommendations to spend \$6 million to buy land and save a historic dam.

The San Diego River Park Alliance, led by San Diego Mayor Dick Murphy, voted unanimously to recommend state purchase of what environmentalists said are key parcels for the river plan to work.

"There were a lot of skeptics out there who said it was too late to save the San Diego River, and I have disagreed with that and today is the first step toward preserving the San Die-

ervation.

"Our predecessors did a crummy job of saving the river but it's not all gone," Murphy said.

Purchase of the 102 acres east of Santee is critical because "this is one of the few places we can create a functioning flood plain," said Michael Beck, chairman of the San Diego River Park Lakeside Conservancy.

The property is owned by Vulcan Materials and is a former sand mining site, Beck said. A portion of the property is covered with sand and dirt fill, which would be removed to restore the land to its natural state to allow water to flow through during periods of heavy rain.

Beck said restoring that land would complement plans by his group to build ballparks, a passive park and a nature and cul-

tural center nearby.

The dredging project is essential because a buildup of silt is increasing water pressure on the dam, putting the dam at risk, said Dorothy Leonard of the Mission Trails Regional Park Advisory Committee. The dam was completed about 1813 as the first major water improvement project in Spanish San Diego.

San Diego River Park Alliance members include Rep. Susan Davis, D-San Diego; state Sen. Dede Alpert, D-San Diego; Assembly members Christine Kehoe, D-San Diego; County Supervisor Dianne Jacob; Santee Mayor Randy Voepel; San Diego City Council members Donna Frye and Jim Madaffer; and JoAnn Anderson of the San Diego River Foundation.

Ray Huard: (619) 542-4597;
ray.huard@uniontrib.com

Of the state money, \$4.2 million will go toward buying 102 acres of riverfront land east of Santee on the south side of the river west of Channel Road and north of the San Vicente Freeway.

An additional \$1.63 million will go to dredging the river and removing nonnative vegetation near the Old Mission Dam in Mission Trails Regional Park and to buying 21 acres bracketing a segment of the river in Mission Valley from Qualcomm Way to Interstate 805.

The nearly \$6 million would come from a pool of \$12 million in state park and clean water bond money that Gov. Gray Davis has set aside for San Diego River projects.

The state Resources Agency is expected to decide on the requests in the next several months.

Murphy formed the alliance of state and regional officials last year after he called for creation of the San Diego River Park in his 2002 State of the City address.

The alliance advises the state Resources Agency on how the \$12 million should be spent and works with other groups to develop plans for the river's pres-

Board of Directors:

Billie G. Sangster
PRESIDENT

Joseph P. Till
TREASURER



RIVERVIEW WATER DISTRICT

11769 Waterhill Road
Lakeside, CA 92040-2998
Phone: (619) 561-1333
Fax: (619) 561-1659

Board of Directors:

Irvin R. Lynn
DIRECTOR

Parry Schwen
DIRECTOR

Robert Kleinschmidt
DIRECTOR

To: Lakeside Land Co. 3052 Clairemont Dr. #A San Diego, Ca. 92117.

Re: APN # 38226009, 38226008, 38201106, and 37919215.

This letter is to inform you that the Riverview Water District in conjunction with the San Diego River Park – Lakeside Conservancy is applying for a Flood Protection Corridor Program Grant to enhance flood control activities in the San Diego River.

Your property is adjacent to the proposed project and we are notifying you of the grant application per the grant regulations.

We are very happy to be a co-sponsor of this project and feel that it will be a benefit to adjacent property owners as well as a benefit to the ground water in the area.

Thank you very much.

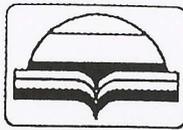
Sincerely,

Jeanne Swaringen
General Manager.

Board of Directors:

Billie G. Sangster
PRESIDENT

Joseph P. Till
TREASURER



RIVERVIEW WATER DISTRICT

11769 Waterhill Road
Lakeside, CA 92040-2998
Phone: (619) 561-1333
Fax: (619) 561-1659

Board of Directors:

Irvin R. Lynn
DIRECTOR

Parry Schwen
DIRECTOR

Robert Kleinschmidt
DIRECTOR

To: Conrock Co. 3200 N. San Fernando Rd. Los Angeles, CA. 90065.

Re: APN # 38201110.

This letter is to inform you that the Riverview Water District in conjunction with the San Diego River Park – Lakeside Conservancy is applying for a Flood Protection Corridor Program Grant to enhance flood control activities in the San Diego River.

Your property is adjacent to the proposed project and we are notifying you of the grant application per the grant regulations.

We are very happy to be a co-sponsor of this project and feel that it will be a benefit to adjacent property owners as well as a benefit to the ground water in the area.

Thank you very much.

Sincerely,

Jeanne Swaringen
General Manager.

Board of Directors:

Billie G. Sangster
PRESIDENT

Joseph P. Till
TREASURER



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Phone: (619) 561-1333
Fax: (619) 561-1659

Board of Directors:

Irvin R. Lynn
DIRECTOR

Parry Schwen
DIRECTOR

Robert Kleinschmidt
DIRECTOR

To: ALPHA Investors Inc. 11905 Riverside Dr. Lakeside, Ca. 92040.

Re: APN # 37920022.

This letter is to inform you that the Riverview Water District in conjunction with the San Diego River Park – Lakeside Conservancy is applying for a Flood Protection Corridor Program Grant to enhance flood control activities in the San Diego River.

Your property is adjacent to the proposed project and we are notifying you of the grant application per the grant regulations.

We are very happy to be a co-sponsor of this project and feel that it will be a benefit to adjacent property owners as well as a benefit to the ground water in the area.

Thank you very much.

Sincerely,

Jeanne Swaringen
General Manager.

A handwritten signature in cursive script that reads "Jeanne Swaringen". The signature is written in black ink and is positioned to the right of the typed name and title.

Board of Directors:

Billie G. Sangster
PRESIDENT

Joseph P. Till
TREASURER



RIVERVIEW WATER DISTRICT

11769 Waterhill Road
Lakeside, CA 92040-2998
Phone: (619) 561-1333
Fax: (619) 561-1659

Board of Directors:

Irvin R. Lynn
DIRECTOR

Parry Schwen
DIRECTOR

Robert Kleinschmidt
DIRECTOR

To: Hanson Aggregates 9229 Harris Plant Rd. San Diego, Ca. 92163.

Re: APN # 37920023.

This letter is to inform you that the Riverview Water District in conjunction with the San Diego River Park – Lakeside Conservancy is applying for a Flood Protection Corridor Program Grant to enhance flood control activities in the San Diego River.

Your property is adjacent to the proposed project and we are notifying you of the grant application per the grant regulations.

We are very happy to be a co-sponsor of this project and feel that it will be a benefit to adjacent property owners as well as a benefit to the ground water in the area.

Thank you very much.

Sincerely,

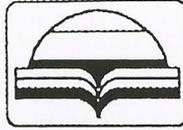
Jeanne Swaringen
General Manager.

A handwritten signature in cursive script that reads "Jeanne Swaringen". The signature is written in black ink and is positioned to the right of the typed name.

Board of Directors:

Billie G. Sangster
PRESIDENT

Joseph P. Till
TREASURER



RIVERVIEW WATER DISTRICT

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Lakeside, CA 92040-2998
Phone: (619) 561-1333
Fax: (619) 561-1659

Board of Directors:

Irvin R. Lynn
DIRECTOR

Parry Schwen
DIRECTOR

Robert Kleinschmidt
DIRECTOR

To: County of San Diego. *Dept. of Planning + Land Use 3201 Ruffin Rd. S. # B*
S.D. Ca. 92123
Re: APN # 39209007.

This letter is to inform you that the Riverview Water District in conjunction with the San Diego River Park – Lakeside Conservancy is applying for a Flood Protection Corridor Program Grant to enhance flood control activities in the San Diego River.

Your property is adjacent to the proposed project and we are notifying you of the grant application per the grant regulations.

We are very happy to be a co-sponsor of this project and feel that it will be a benefit to adjacent property owners as well as a benefit to the ground water in the area.

Thank you very much.

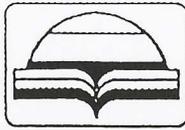
Sincerely,

Jeanne Swaringen
General Manager.

Board of Directors:

Billie G. Sangster
PRESIDENT

Joseph P. Till
TREASURER



RIVERVIEW WATER DISTRICT

11769 Waterhill Road
Lakeside, CA 92040-2998
Phone: (619) 561-1333
Fax: (619) 561-1659

Board of Directors:

Irvin R. Lynn
DIRECTOR

Parry Schwen
DIRECTOR

Robert Kleinschmidt
DIRECTOR

To: Lakeside Business Park P.O. Box 21276 El Cajon, Ca. 92021.

Re: APN # 39401134, 39401119, and 39401123.

This letter is to inform you that the Riverview Water District in conjunction with the San Diego River Park – Lakeside Conservancy is applying for a Flood Protection Corridor Program Grant to enhance flood control activities in the San Diego River.

Your property is adjacent to the proposed project and we are notifying you of the grant application per the grant regulations.

We are very happy to be a co-sponsor of this project and feel that it will be a benefit to adjacent property owners as well as a benefit to the ground water in the area.

Thank you very much.

Sincerely,

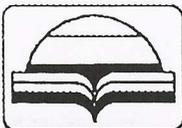
Jeanne Swaringen
General Manager.

A handwritten signature in cursive script that reads "Jeanne Swaringen". The signature is written in black ink and is positioned to the right of the typed name and title.

Board of Directors:

Billie G. Sangster
PRESIDENT

Joseph P. Till
TREASURER



RIVERVIEW WATER DISTRICT

11769 Waterhill Road
Lakeside, CA 92040-2998
Phone: (619) 561-1333
Fax: (619) 561-1659

Board of Directors:

Irvin R. Lynn
DIRECTOR

Parry Schwen
DIRECTOR

Robert Kleinschmidt
DIRECTOR

To: Leonard Grape P.O. Box 5 Lakeside, Ca. 92040.

Re: APN # 39401127.

This letter is to inform you that the Riverview Water District in conjunction with the San Diego River Park – Lakeside Conservancy is applying for a Flood Protection Corridor Program Grant to enhance flood control activities in the San Diego River.

Your property is adjacent to the proposed project and we are notifying you of the grant application per the grant regulations.

We are very happy to be a co-sponsor of this project and feel that it will be a benefit to adjacent property owners as well as a benefit to the ground water in the area.

Thank you very much.

Sincerely,

Jeanne Swaringen
General Manager.

A handwritten signature in cursive script that reads "Jeanne Swaringen". The signature is written in black ink and is positioned to the right of the typed name and title.

Appendix G
Evaluation Letter from Civil Engineer
Resume of Qualifications of Robert Mussetter

Mussetter
Engineering
Inc.

Consultants in
Water Resource Engineering &
Engineering Geomorphology

February 11, 2003

Ms. Robin Rierdan
Project Manager
San Diego River Park – Lakeside Conservancy
117569 Waterhill Road
Lakeside, California 92040

Re: **Flood Control, Habitat, Restoration and Recharge on the San Diego River**
Flood Protection Corridor Program Grant Application

Dear Ms. Rierdan:

I am a professional with over 20 years of experience in river engineering, fluvial geomorphology and flood control. During my career, I have completed numerous projects throughout the United States that involved nonstructural measures or appropriate combinations of nonstructural and structural methods to reduce flooding and protect public safety while improving instream and riparian habitat conditions in situations such as you have in the San Diego River watershed. Based on a preliminary review of the available information and my experience with streams in southern California, it is my opinion that the concept of removing the constriction near the Channel Road Bridge, widening and lowering the elevation of the floodplain through the project reach, and creating a sinuous channel with a reasonable in-bank capacity is an appropriate approach to meeting the flood-control and environmental goals for your project.

The above opinion is based, in part, on conclusions from the Upper San Diego River Flood Control Study, Santee City Limits to Confluence with San Vicente Creek (George S. Nolte and Associates, 1986) that the future sediment supply to the project reach will be very low due to the sediment-trapping effects of the upstream dams and the effects of upstream urbanization. The studies on which these conclusions are based indicate that the low sediment supply will result in an equilibrium channel gradient through the reach that is much flatter than the existing gradient, and a series of grade-control structures were recommended to stabilize the river at the flatter gradient. Development of a sinuous channel, as suggested for the current project, will facilitate a flatter channel gradient that will eliminate, or at least reduce, the need for grade-control structures. The sinuous channel will also facilitate the development of variability in the cross-sectional shape and longitudinal profile of the river that is important to instream and riparian habitat. Widening and lowering the floodplain to provide an appropriate in-bank capacity for the sinuous channel will provide increased flood conveyance and a modest amount

Ms. Robin Rierdan
Page 2
February 11, 2003

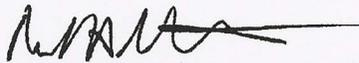
of flood storage during large events, while allowing overbank flows at intervals that will enhance the quality of the riparian and overbank vegetation. Based on the preliminary information that was made available to me, I believe it should be possible to create a floodway through the project reach in this manner that will limit the regulatory flood elevations to at or below the existing flood elevations.

Please understand that the above opinions are based on a preliminary review of the available information. Validation of these opinions will require the completion of appropriate hydrologic, hydraulic and sediment-transport studies. Barring any unforeseen findings in those studies, I believe the project concept that you have proposed will serve the purpose of reducing flood damage and enhancing river functions and habitat values.

I look forward to working with you on this challenging and interesting project.

Sincerely,

MUSSETTER ENGINEERING, INC.



Robert A. Mussetter, Ph.D., P.E.
Principal Engineer

RAM:bbv

ROBERT A. MUSSETTER

POSITION:

President and Principal Engineer
Mussetter Engineering, Inc.

EDUCATION:

1989 Ph.D. Civil (Hydraulic) Engineering
Colorado State University, Fort Collins, Colorado

1982 M.S. Civil (Hydraulic) Engineering
Colorado State University, Fort Collins, Colorado

1976 B.S. Civil Engineering
Montana State University, Bozeman, Montana

PROFESSIONAL CAREER:

Jan 1994 - present President and Principal Engineer, Mussetter Engineering, Inc.

Sept 1992 - Jan 1994 Vice President, Resource Consultants & Engineers, Inc

Jan 1991 - Sept 1992 Principal, Resource Consultants, Inc.

Sept 1989 - Jan 1991 President, Mussetter Engineering, Inc.

Sept 1987 - Sept 1989 Associate and Manager of Fort Collins office,
Simons, Li & Associates, Inc.

Sept 1986 - Sept 1987 Senior Engineer and Manager of Fort Collins office,
Simons, Li & Associates, Inc.

Mar 1984 - Sept 1986 Senior Engineer and Project Manager, Simons, Li & Associates,
Inc.

Dec 1981 - Mar 1984 Hydraulic Engineer, Simons, Li & Associates, Inc.

Aug 1980 - Dec 1981 Research Assistant, Colorado State University, Fort Collins, CO.

Jun 1976 - Aug 1980 Officer, U.S. Army Corps of Engineers, Fort Eustis, VA (Platoon
leader, facility engineer, highest grade achieved: Captain).

PROFESSIONAL SOCIETIES:

American Society of Civil Engineers
American Geophysical Union

REGISTRATIONS:

Registered Professional Engineer: Arizona (1985) #17918
California (1999) #59128
Colorado (1983) #20758
Idaho (1997) #8809
Montana (1984) #4803-PE
New Mexico (1995) #12603
South Dakota (1995) #6001
Wyoming (1987) #5427

COMMITTEES AND OTHER AFFILIATIONS:

Faculty Affiliate Colorado State University, Civil Engineering, Department
Member American Society of Civil Engineers, Urban Erosion Technical Committee
Member Federal Emergency Management Agency, Riverine Erosion Hazard Area
Project Working Group

REPRESENTATIVE PROJECT EXPERIENCE (LITIGATION):

Evaluation of flooding impacts on the Neosho River associated with backwater from Grand Lake of the Cherokees, Miami, Oklahoma (litigation support, deposition only).

Evaluation of stream channel processes and water rights claims for channel maintenance flows by the U.S. Forest Service and U.S. Fish and Wildlife Service and various Indian tribes throughout the Snake River Basin in Idaho (litigation support and affidavits).

Evaluation of instream flows for channel maintenance purposes for National Forest streams in Colorado (extensive litigation support, affidavits, deposition and expert testimony at trial.)

Analysis of failure of a natural gas line crossing the Truckee River near Carson City, Nevada (litigation support and deposition).

Analysis of reservoir operations at Lahontan Dam, Nevada to determine causes of erosion damage at a construction site (litigation support and affidavits).

Evaluation of the Coeur d'Alene and South Fork Coeur d'Alene Rivers for mine tailings impacts (litigation support and deposition).

REPRESENTATIVE PROJECT EXPERIENCE (CONSULTING):

Author of an "Erosion and Sediment Design Guide" for the Albuquerque Metropolitan Arroyo Flood Control Authority for use by public agencies and consultants in designing flood control and erosion protection measures in urbanized areas of the Southwestern U.S.

Analysis of channel stability and determination of an erosion risk line (prudent line) along Calabacillas Arroyo, Albuquerque, New Mexico.

Geomorphic and sediment yield analysis for erosion feeding to the North Diversion channel

Instructor for the National Highway Institute's "Stream Stability and Scour at Highway Structures" training course (presented the course nine times, to-date).

Design of the Standard Project Flood channelization for a 2-mile reach of the Agua Fria River, Arizona.

Preparation of Master Drainageway Plan for Cache la Poudre River corridor in Fort Collins, Colorado.

Evaluation of flooding impacts on the Neosho River associated with backwater from Grand Lake of the Cherokees, Miami, Oklahoma (litigation support).

Development of a reclamation plan to restore approximately two miles of Whitewood Creek near Deadwood, South Dakota. The project reach has been heavily impacted by the discharge of mine tailings and subsequent placer mining of the deposits.

Evaluation of the impacts to stream channel stability in the Uncompaghre River between Montrose and Delta, Colorado (?35 miles) of a proposed hydropower operation.

Evaluation of the channel stability and flooding impacts along the Genesee River near Rochester, New York associated with subsidence of the river valley caused by underground salt mining.

Evaluation of stream channel processes and water rights claims for channel maintenance flows by the U.S. Forest Service and various Indian Tribes throughout the Snake River Basin in Idaho (litigation support).

Sediment engineering and channel stability analysis of the Feather and Yuba Rivers, California between the Sutter Bypass and Daguerre Point Dam (?35 miles) to evaluate potential impacts to lateral and vertical stability associated with increased in-levee capacity.

Sediment engineering and channel stability analysis of the Lower American River, California between Sacramento River confluence and Folsom Dam (?23 miles) to evaluate potential impacts to levees, bank protection and riparian habitat associated with various operation scenarios for Folsom Dam.

Sediment engineering and channel stability analysis of the Middle Fork American River, California to evaluate to distribution of sediment deposits upstream of the proposed Auburn Dry Dam and the potential for coarse sediment entrainment through the Dry Dam sluices.

Assessment of cobble bar dynamics and sediment movement in the North Fork Feather River, California to evaluate the potential impacts to fish and riparian habitat associated with sediment-pass-through operations from hydropower facilities.

Evaluation of critical spawning habitat for endangered fishes in the Upper Colorado River basin, including studies on the Yampa River in Dinosaur National Monument, Green River in Desolation and Gray Canyons and the Mineral Bottoms area, and the Colorado River near Grand Junction, Colorado.

Appendix H
Tax Base Information

Section B4, Question 5

Will the project as proposed impact the present tax base?

The proposed project will be a net benefit to the tax base of the community. The area is within the Upper San Diego River Improvement Project boundaries, a redevelopment area of the County of San Diego. Currently, the district generates \$920,443 tax increment¹, primarily from the establishment of one new commercial enterprise and construction of approximately 35 home subdivision and general increases in property tax revenues. Several new subdivisions are underway or under review by the County Department of Planning and Land Use. All will benefit from the additional flood protection provided by the project.

Although the proposed project is located within the tax increment finance district, the two properties (Cal-Mat and Lakeside Land Co.) have diminished value as commercial property. The Lakeside Land Co. property is effectively landlocked without adequate access to Riverford Road. The Cal-Mat property was never adequately compacted and cannot be developed without removal of the fill and re-compaction. This is a very expensive proposition and has caused several prospective buyers to walk away from the property. The properties' tax generation benefits, as commercial property, may never be realized.

The community of Lakeside is beginning to reposition itself as a day-trip tourist destination. The River Park, with its anticipated 400,000 visitors per year, combined with the ability to capture the 3,000,000 annual tourists visiting the new Barona Casino and Resort, will become the basis for the revitalization efforts of Lakeside Historic Central Business District (LHCBD) located near by. The most recently published statistics on sales tax revenues show only \$105,000² per year in sales tax revenues. A preliminary study on tourism based revenues coming from the River Park and the Barona Casino and Resort based visitors conservatively increases sales tax revenues to \$410,000³. This is in addition to increasing the protection of existing homes and businesses located near the river and the water quality benefits for the Riverview Water District.

¹ Redevelopment Agency of the County of San Diego: Audited Financial Statements, June 30, 2002

² **Lakeside Economic Revitalization Plan**, San Diego County Department of Planning and Land Use 1999

³ Tourism in Lakeside, San Diego River Park – Lakeside Conservancy white paper.

The project will provide a net benefit to the Upper San Diego River Improvement Project. First it will enhance the flood capacity and provide an additional level of flood protection to the businesses and residences within the district.

Further, the presence of open space, protected habitat and wild lands has a net benefit to property values and tax revenues. Habitat restored areas all add to the quality of life in an area. This impact is felt strongly with new construction. People want to live near parks and wild areas and are willing to pay a premium for the opportunity.⁴ "There is a very strong correlation between the existence of parks and property values. Properties adjacent to large parks and open spaces derive from 10% to 30% of their value from this proximity."⁵

⁴ **Quantifying Our Quality of Life**, prepared for the East Bay Regional Park District by Economics and Planning Systems, Inc. November 2000

⁵ **Quantifying Our Quality of Life** prepared for the East Bay Regional Park District by Economics and Planning Systems, Inc. November 2000

Appendix I
Project Budget and GANT Chart

Proposed Budget for Flood Protection Corridor Grant

Budget for the acquisition of 125 acres and the restoration of 120 acres

Task 1	Administration		
	1.1 12 Quarterly Reports	\$45,600	
	1.2 Contract Summary	\$14,400	
	1.3 Project Management	\$187,200	
	1.4 Subcontractor Documentation	\$37,440	
	1.5 Expenditure/Invoices	\$46,800	
	1.6 Audit Requirements	\$30,000	
		\$361,440	\$361,440
Task 2	CEQA/NEPA, Permit Review		
	2.1 Initial Study/Addendum	\$4,800	
	2.2 Permit Evaluation Report		
	404	\$4,000	
	401	\$4,000	
	Section 7	\$3,600	
	Section 106	\$3,600	
	ST CAL SAA	\$3,600	
	ST CAL SMRA	\$3,600	
	BMO	\$3,600	
	County/City Grading Plan	\$3,600	
	Local Permitting	\$3,600	
		\$38,000	\$38,000
Task 3	Due Diligence		
	3.1 Survey/Topo	\$50,000	
	3.2 Title Report	\$8,000	
	3.3 Appraisal	\$15,000	
	3.4 HAZMAT - Phase 1	\$25,000	
	3.5 HAZMAT - Phase 2	\$25,000	
	3.6 Wetland Biological Study	\$5,000	
		\$128,000	\$128,000
Task 4	Property Acquisition	\$10,100,000	
	Fund and Close		
		\$10,100,000	\$10,100,000
Task 5	Feasibility - Engineering Studies		
	5.1 Histo/Exist Conditions, Topography		
	5.2 Hazardous Substance Review		
	5.3 Geology and Soils, Geomorphology		
	5.4 Historic Setting, Anthropogenic Impacts, Current Conditions		
	Expected Future Conditions,		
	5.5 Hydraulics and Sediment Transport, Hydraulic Model Development		
	Reach Area, Hydraulics, Bed Material		
	Sediment Transport – Project Reach and Upstream Supply		
	Water Balance, Climate Analysis, Review of Existing Water Quality Data		
		\$120,000	\$120,000
Task 6	Feasibility - Bio/Riparian/Aquatic Studies		
	6.1 Baseline Geomorphologic, Hydraulic and Biological Studies		
	Subsurface Soils Investigation, Existing Conditions		
	Habitat Evaluation Procedure (HEP)		
	Habitat Loss and Degradation, Mapping Exotic Species		
	Changes in Structure, Function and Dynamic Processes of the River		
	6.2 Restoration Opportunities		
	Availability of Water for Wetland and Riparian Habitat Creation		
	Feasibility of Wetland types to support threatened and endangered species		
	Creation, Restoration, and Conservation in perpetuity to Benefit Wildlife		

including Threatened and Endangered Species
 Benefits to Migratory Birds
 Cumulative benefits to other State and Local Conservation initiatives

		\$120,000	\$120,000
Task 7	Project Evaluation Criteria		
		\$55,000	\$55,000
Task 8	Conceptual Design		
		\$55,000	\$55,000
Task 9	CEQA Study		
	Visual Resources/Aesthetics		
	Vegetation and Wildlife/Fisheries		
	Water Quality/Water Resources		
	Air Quality/Noise		
	Public Utilities		
	Cultural Resources		
		\$70,000	\$70,000
Task 10	Acquire All Necessary Permits		
		\$135,000	\$135,000
Task 11	Final Design- Plans & Specifications		
	11.1 Review of Goal and Objectives		
	11.2 Restoration and Engineering Design		
	11.3 Develop Plan & Specifications		
	11.4 Construction Bid Documents		
		\$150,000	\$150,000
Task 12	Construction Implementation		
	12.1 Grading/Excavation	\$0	
	12.2 Removal of Non-natives		
	12.3 Irrigation/Planting		
	12.4 Bio-Erosion control		
	12.5 Review and Acceptance	\$560,000	
	12.6 Contingency	\$56,000	
		\$616,000	\$616,000
Task 13	Community Education and Outreach		
	13.1 Interpretive Materials	\$10,000	
	13.2 Signage		
		\$10,000	\$10,000
Task 14	Success Criteria		
	14.1 Water Quality Testing/QAPP		
	14.2 Photomonitoring		
	14.3 Threatened and Endangered Survey	\$39,000	
	14.4 Contingency Measures		
	14.5 Maintenance Plan	\$120,000	
		\$159,000	\$159,000
Task 15	Reports		
	15.1 Draft	\$14,400	
	15.2 Final	\$7,200	
		\$21,600	\$21,600

Total Budget Costs

\$12,139,040

Total Implementation \$2,039,040

Total Acquisition Gap Funding \$2,100,000

Total Grant \$4,139,040

Excavation Cost Scenarios

Constants

Calmat Removal: 40 acres

Lakeside Land Co. Removal: 4.3 acres

Depth of fill removed: 15 ft

Scenario 1: \$4/cubic yard to remove the fill

Total cost to the project **\$4,356,000.00**

Scenario 2: \$3/cubic yard to remove the fill

Total Cost to the Project **\$3,267,000.00**

Scenario 3: Fill is removed at no charge

Total cost to the project **0**

Scenario 4: Fill is sold at \$.50/per cubic yard

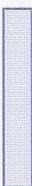
Total revenue to the project **\$544,500.00**

Small Communities Grant - Prop 13

	TASK	TOTAL COST
Task 1	Administration	\$236,840
Task 2	CEQA/NEPA Permit Review	\$12,600
Task 3	QAPP	\$5,500
Task 4	Due Diligence	\$32,250
Task 5	Property Acquisition	\$0
Task 6	Feasibility Study	\$58,425
Task 7	Permit Acquisition	\$65,000
Task 8	Final Design	\$126,225
Task 9	Construction	\$604,585
Task 10	Community Outreach	\$27,800
Task 11	Success Criteria	\$39,320
Task 12	Final Reports	\$10,820
	Total	\$1,219,365
	Total Grant Amount:	\$1.29 million

ID	Text1	Task Name	Duration	Start	2004	2005	2006	2007	2008	
1					J	F	M	A	M	J
2	Task 1	Administration	38 mons	Thu 1/1/04	J	F	M	A	M	J
3	Task 2	CEQA/NEPA, Permit Review	8 mons	Thu 4/1/04	J	F	M	A	M	J
4	Task 4	Due Diligence	4 mons	Thu 4/1/04	J	F	M	A	M	J
5	Task 5	Property Acquisition	6 mons	Tue 6/1/04	J	F	M	A	M	J
6	Task 6	Feasibility - Engineering Studies	8 mons	Tue 6/1/04	J	F	M	A	M	J
7	Task 7	Feasibility - Bio/Riparian/Aquatic Studies	8 mons	Tue 6/1/04	J	F	M	A	M	J
8	Task 8	Project Evaluation Criteria	2 mons	Tue 2/1/05	J	F	M	A	M	J
9	Task 9	Conceptual Design	2 mons	Fri 4/1/05	J	F	M	A	M	J
10	Task 10	CEQA Study	6 mons	Wed 11/10/04	J	F	M	A	M	J
11	Task 11	Acquire All Necessary Permits	12 mons	Wed 6/1/05	J	F	M	A	M	J
12	Task 12	Final Design- Plans & Specifications	9 mons	Wed 6/1/05	J	F	M	A	M	J
13	Task 13	Construction Implementation	6 mons	Wed 5/3/06	J	F	M	A	M	J
14	Task 14	Community Education and Outreach	16 mons	Wed 6/1/05	J	F	M	A	M	J
15	Task 15	Success Criteria	24 mons	Wed 10/18/06	J	F	M	A	M	J
16	Task 16	Final Reports	2 mons	Wed 10/1/08	J	F	M	A	M	J

Project: san diego timeline
Date: Wed 2/12/03

Task Split  Progress Milestone  Summary Project Summary  External Tasks External Milestone  Deadline 

Appendix J
Background information about Huffman and
Carpenter, Inc.

HUFFMAN & CARPENTER, INC.

Wetland Regulatory and Hydrologic Consultants

Dedicated to Affect, Promote and Accomplish Watershed Restoration for Human & Wildlife Habitats



700 Smithridge Drive, Suite 102A, Reno, NV 89501 * (775) 828-1991 * Fax (775) 828-2302
email: lori@nvwetlands.com * SBA small business and 8a firm * DBE no. NV585DOT98

Huffman & Carpenter, Inc. has offices in Reno, Nevada Truckee and Oakland, California. We combine the highest quality expertise with a practical understanding of environmental issues to produce creative, cost-effective solutions that meet our clients' needs.

Huffman & Carpenter, Inc. provides professional consulting services to the private development sector, public resource agencies and local jurisdictions in the fields of environmental analysis, permitting, and planning. We have particular expertise in handling wetland and other sensitive habitat issues and in the application of Geographic Information Systems (GIS) to track, analyze and manage a wide range of environmental, land use and infrastructure data in support of planning and decision making processes.

Huffman & Carpenter, Inc. assists private development clients in all project phases, specializing in advanced project planning to minimize costly regulatory delays, as well as project re-design, re-alignment and re-routing to meet regulatory requirements. In addition to working with private development clients, the principals of this firm have extensive experience with federal, state and local agencies in natural resource assessment, planning and management.

Although we have considerable expertise in dealing with environmental issues, we do not rely on expertise alone to solve our client's problems. Instead, we make every effort to understand the deadlines and other constraints under which our clients work, in addition to providing them with the best people for the task at hand. Moreover, the principals at **Huffman and Carpenter, Inc.** are always involved in all phases of our clients' projects, and have associative arrangements with a core group of expert sub-consultants in relevant disciplines. This assures the most comprehensive, cost-effective delivery of client services.

Huffman & Carpenter, Inc. is highly respected by state and federal environmental regulatory agencies, environmental interest groups and the private development sector. We have earned this respect by consistently acting as objective organizations that provide relevant technical information and documentation in an understandable, fair and even-handed manner. It is our firm belief, based on many years experience, that this approach ultimately serves our clients' best interests.

REGULATORY

Wetland Permitting and Consulting Assistance

- Wetland boundary determinations using state and federal multi-criteria methodologies, which are based on protocols originally developed by Dr. Huffman for the U.S. Army Corps of Engineers
- Project design consultation, assessment of regulatory requirements and pre-application consultations with concerned agencies and pre-development planning services
- Alternatives analyses as required for Corps permit applications under EPA's 404(b)(1) Guidelines
- Preparation of complete U.S. Army Corps of Engineers permit applications under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act
- Mitigation planning, project re-design and agency negotiation. Post-development mitigation monitoring and compliance reporting
- Endangered species surveys/mitigation plans and procurement of state water quality/coastal zone certifications as required under Corps permit procedures
- Development of wetland mitigation banks
- Habitat restoration/enhancement

Assistance to Attorneys

- Expert testimony
- Identification and analysis of regulatory/litigation issues
- Critical habitat due diligence investigations
- Post-violation forensic investigations
- Assistance in preparing affidavits and in preparing and answering interrogatories

WATER QUALITY

- Stormwater Pollution Prevent Plans
- Design, implementation and monitoring of erosion control measures and best management practices
- Design and implementation of constructed wetland systems for stormwater retention and water quality improvement
- Hydrologic studies, including development and implementation of water quality monitoring plans
- Hydrological analyses for water quality studies and restoration projects, including computer modeling of rainfall/runoff, surface water quality, and channel hydrodynamics

WATERSHEDS, RIVERS & WETLANDS

Watershed Assessment, River, Stream & Wetland Restoration/Mitigation

- Conduct fluvial geomorphological watershed assessments, & hydraulic and hydrologic studies, to include sediment transport, prepare construction documents, construction monitoring/inspection
- Habitat restoration/enhancement

WATERSHEDS, RIVERS & WETLANDS (Cont.)

Geographic Information Systems Applications

- Critical habitat/land use status and trends analyses
- Enterprise-wide environmental decision support systems integrated with operational, infrastructure and regulatory data
- Area-wide mapping using aerial photography, satellite imagery and other remote sensing techniques
- Resource-specific GIS studies to identify critical or limiting factors requiring special protection or management
- Watershed mapping and analysis of wetland and riparian zone changes
- Spill tracking and documentation of natural resource damages

Environmental Services and Impact Assessments

- Advance identification of sensitive habitats to aid in project site selection and long-range local planning
- Impact avoidance, minimization and mitigation strategies
- Habitat value and impact assessment using HEP (Habitat Evaluation Procedures) and wetland functional assessment methods, HGM, PFC, or landform process geomorphology to assess habitat evolution, thresholds and restoration potential
- Development of ecologically based management/preservation plans for wildlife utilizing natural history data to construct models detailing habitat requirements
- Cultural resource evaluations
- Assessments pursuant to local coastal planning requirements
- Ecological inventory and impact assessment in a variety of terrestrial, freshwater, estuarine and marine environments
- Consultation with the U.S. Fish and Wildlife Service on projects subject to the National Environmental Policy Act and the Endangered Species Act; Section 7 consultation
- Consultation with state agencies on projects subject to state environmental laws and regulations (e.g., state laws governing endangered species and environmental impact assessment)
- Database interpretation for siting evaluation
- Assistance with preparation of Environmental Assessments and Environmental Impact Statements
- Coordination of EIS and multiple permit requirements
- Public participation programs and public hearings
- Evaluation of land use and natural resource issues

WATER SUPPLY & WATER RESOURCES

- Water Rights Investigations/Procurement
- Ground Water Investigations
- Water Supply Development

Representative Clients

Amex Mining
Barker Homes
Bechtel National, Inc.
Black Point Partnership
Boomtown Corporation
California Coastal Conservancy
Carson Valley Inn
City of Foster City, California
City of Fremont, California
City of New York, New York
City of Oakland, California
City of Reno, Nevada
Costco Companies
Dermody Properties
Crowley Lake
Desert Research Institute -Water Resources Center
Diloreto Construction

Representative Clients Continued.....

DMB Highlands Group
Double Diamond Development
Dyer Mountain Associates
Elrod Family Trust, Carpenter Valley
Family Golf Center
Foothill Partners, LLC
Galena Resort Company
Huffman & Associates
Grizzly Ranch Partners - Golf Course Development
Lahontan Development - Truckee, CA
Lewis Homes
Loeb Enterprises
Malibu Coastal Land Conservancy
Martis Creek LLC (Lahontan Project)
Mission Land Company
Moana Nursery
National Park Service
Nevada Division of Wildlife
Nevada Tri-Partners
New York State Department of the Environment
Nichols Consulting Engineers
Northstar-at-Tahoe Ski Resort
Orchard Management Services
Parr Electric - Quanta Corporation
Perini Land and Development Company
Plumas Sierra Rural Electric Cooperative
Port of Oakland
Pyramid Lake Paiute Tribe
Regional Transportation Commission
R.O. Anderson Engineering
San Francisco Bay Area Regional Water Quality
Control Board
Santa Fe Pacific Pipeline Partners, LP
Sickles Golf Associates
Sierra Club
Silverwing Development Corp.
Skylo Properties
Southern Pacific Transportation Company
Squaw Valley Ski Corp.
Stanford Ranch, Inc.
Steele Enterprises
Summit Engineering
Tahoe Regional Planning Agency
Tawny
Taylor Woodrow Homes
The Resort at Squaw Valley
The Tahoe Nature Conservancy
Truckee River Yacht Club
U.S. Army Corps of Engineers (various Districts)
U.S. Department of Justice
Walker River Paiute Tribe
Washoe County Airport Authority
Washoe County
Western Intercontinental
WorthGroup
Wingfield Springs
Wright, Warren & Schiffmacher

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7700 Edgewater Drive, Suite 725 Oakland, CA, 94621 * (510) 383-3599*
email: www.nvwetlands.com * SBA small business and 8a firm * DBE no. NV585DOT98

Huffman and Carpenter, Inc. (H&C) has represented a diverse public and private client base for the past 12 years. During that time, we have been involved in the preparation and review of more than 150 projects in every type of wetland regulatory situation. H&C is a small, woman owned, 8(a) company, comprised of regulatory specialists and scientists with an experience base which enables us to handle every aspect of a project. H&C is able to respond to tight project schedules and budgets, while still providing excellent quality products. Our professional work has focused on hydraulic process in streams and rivers, habitat classification and functional assessment, the investigation and mitigation of wetlands including constructed wetlands for water quality improvement, erosion control projects and threatened and endangered species.

We also understand the importance of “stakeholder” participation and have successfully guided our clients and their projects through the various processes to insure that project objectives are satisfied. At times this may have meant public consensus on difficult and complex environmental issues, while at other times it may have entailed helping the client enlist other federal agencies as potential funding mechanisms. On behalf of our clients, H&C authored several Section 319(h) grant applications that were funded.

H&C's expertise is focused on understanding wetland regulatory requirements and the design and implementation of constructed wetlands and stream restoration projects at the federal, state and local levels. We assist our clients in understanding and implementing the U.S. Army Corps of Engineers' (Corps) Section 404 regulations, and the regulatory requirements and erosion control measures required by the Tahoe Regional Planning Agency (TRPA) and the California Regional Water Quality Control Board-Lahontan Region (RWQCB). Our firm specializes in effectively obtaining the necessary approvals for all facets of wetlands regulatory issues. We have successfully guided clients through the regulatory process and into the construction, implementation, and monitoring of constructed wetland systems to improve water quality and treatment, and to improve riparian and wildlife habitats.

H&C was involved as a working member of the technical advisory committee at the TRPA that evaluates the protection of stream environment zones to achieve water quality criteria established for Lake Tahoe through the implementation of best management practices. Additionally, H&C developed a *basin-wide* stream environment zone classification system for the TRPA that will be used as the basis for restoration efforts.

H&C has also been directly responsible for developing the *Best Management Plan for Water Quality Management* used as the model for the RWQCB-Lahontan Region. H&C's wetland and surface water hydrologists have been trained in: 1) the Rosgen Stream Classification method; 2) applied fluvial geomorphology; and 3) process geomorphology.

H&C has an excellent track record of legal defensibility. Our wetland delineations and 404(b)(1) project alternatives analysis and mitigation plans have been upheld in Federal District Court and Courts of Appeals. They were deemed thorough and accurate, and satisfied the technical and policy requirements of various

agencies. As a small company H&C is sensitive to the needs of its' clients. The team members assigned will maintain a flexible schedule to meet the needs of the project and address each aspect of the scope of work.

COMPREHENSIVE PROJECTS

The Port of Oakland International Airport, Oakland, California. This project involved over 2,600 acres of land with 640 acres of jurisdictional wetlands delineated in past field projects. Wetland delineations performed over the years have resulted in widely varying estimates of Corps jurisdiction on the Airport property. The purpose of this study was to reduce the level of uncertainty as to what areas were and were not wetlands so that future development planning and day-to-day operations could be implemented with less uncertainty as to treatment and care of areas. To provide the needed information for the Port and its maintenance staff, the following tasks were performed and reports and maps provided: 1) Wetland delineation that included sampling, categorizing and verification of wetland acres 2) Hydrologic modeling of wetland areas to determine if they met the Corps definition of a wetland (2-year event) 3) Wetland functional assessment including food chain productivity, threatened and endangered species, shoreline protection and sediment control, groundwater recharge, flood conveyance and storage, hydrologic support, water quality, cultural values and biogeochemical cycles and atmospheric processes 4) Stormwater Management Plan with recommendations for an improved drainage system and techniques for facility maintenance personnel.5) Vegetation Management Plan to establish operational criteria and provide specific operational techniques/guidelines for vegetation management, low-lying areas and/or eradication of noxious weeds in wetlands 6) Wetlands Management Plan to identify specific management techniques in existing wetlands and specific recommendations to avoid creating new wetlands adjacent to existing wetlands. Recommendations were made to drain wetland areas created by above normal rainfall conditions. Operational criteria was provided along with techniques and guidance for facilities maintenance personnel to inhibit new wetlands from forming due to surface water flooding and ponding 7) All information was incorporated into electronic maps in AutoCAD 14. This was linked to an Oracle table and to Acad Mapguide. Wetland Function and value data and indice values were digitally formatted and the data lined by ESS Connect for use on PORT CAD and GIS System using Oracle and Mapguide.

The Lahontan Project, Truckee, California. This planned development has approximately 741 acres of land with 43 acres of jurisdictional wetlands, 315 acres of open space including an 18- hole golf course, and 383 acres of residential lots and roadways. There are over 43 acres of wetlands, and 1.7 miles of perennial stream course within the project area. Since 1992, H&C, Inc. has been responsible for baseline water quality data collection and data analysis to establish discharge standards for the proposed project. H&C, Inc. has also been responsible for watershed analysis to determine secondary impacts to wetlands due to the quality of water discharging into wetlands - thereby preserving wetland integrity. Additionally, the impacts from channelized urban storm runoff and the resultant sedimentation, erosional deposition and nutrient loading from waters discharging into the wetland have been evaluated. To mitigate these secondary impacts H&C, Inc. designed a best management plan to cover the 741 acre property. H&C, Inc. was responsible for preparing and obtaining approval of the following: 1) wetland delineation, verification and construction of mitigation wetlands; 2) Geomorphological assessment and Martis Creek stream restoration project; 3) baseline water quality collection and analysis; 4) data analysis to establish primary water quality discharge standards; 5) watershed modeling to determine storm water runoff; 6) NPDES Permit; 6) Chemical Application

Management Plan; 7) Best Management Practices Plan; 8) construction implementation; 9) avoidance analysis; 10) 401 Lahontan Water Quality Certification; and 11) an approved Nationwide Permit.

Additionally, H&C conducted a stream restoration plan for Martis Creek through the project site that encompassed the use of hydraulic geometry relationships, analytical determination of stable channel dimensions and a sediment impact assessment. The project resulted in additional riffle-pool complexes and a stable meandering stream course and increased floodplain volume to meet strict regulatory requirements.

West Jordan, Utah Section 206 Environmental River Restoration Project. This project is intended to broaden the Jordan River management vision from the historic goals of erosion and flood control to encompass the additional objective of enhancing river-based wildlife habitats. The project focuses on restoring functional aquatic, riparian, and wetland habitats along a reach of the Jordan River. The study reach currently flows in a dredged channel incised approximately 12 feet below the historic flood plain. This limits instream fish and wildlife habitat and precludes development of riparian or wetland vegetation along the river.

A study conducted by H&C, Inc. established baseline conditions of the river's geomorphology, hydrology, hydraulic processes, and included identification of riverine habitats for restoration. A feasibility study is currently underway that will examine in detail several potential restoration design options and select one option for final design. The restoration options include a realignment of one section of the river to recreate a more diverse channel than currently exists, complete with a flood plain that will be inundated periodically and will support riparian vegetation. Our emphasis in creating riparian habitat is to improve conditions for neotropical migrant songbirds, many species of which rely on riparian habitats for breeding habitat or as stopover sites during migration through the otherwise arid Great Basin. Another design will leave the river in its present channel and create a benched floodplain adjacent to the river. Again, this option is intended to encourage riparian vegetation and improve wildlife habitat along the river. Our analysis of the two options includes water surface profiling, sediment transport and sediment balance modeling, and prediction of flood plain inundation and groundwater levels needed to support riparian vegetation. Once a preferred option is identified, final design will take place. The final design will be carefully analyzed to ensure that it does not increase flooding along the river and the restored channel will remain in dynamic equilibrium with the rest of the Jordan River. Final design will include plans for replanting native riparian vegetation and controlling invasive exotic vegetation.

Grizzly Creek Ranch, Portola, CA. This planned residential development has approximately 1042 acres of land with 16.06 acres of jurisdictional wetlands, designated open space, a golf course and commercial/service areas. The basic purpose of the proposed Grizzly Ranch project is to develop a single-family residential community with an integrated golf course development and the associated service-related facilities Total WOUS/wetlands equal 16.06 acres of which 1.79 acres will be permanently impacted by the proposed project.

Huffman and Carpenter, Inc. (H&C) conducted a thorough field survey to sample, categorize and verify wetland areas, which were then assessed to determine if they met the Corps definition of a wetland. Concurrent to the wetland delineation, a Storm Water Pollution Prevention Plan and Best Management Practices were developed for the site.

H&C was also responsible for all aspects of the U.S. Army Corps of Engineers (Corps) permitting package to include: 1) wetland delineation and verification; 2) avoidance analysis; 3) 401 Water Quality Certification; 4) functional assessment; 5) Corps Letter of Permission and form 4345; and 6) a detailed mitigation plan.

WETLAND DELINEATIONS

Huffman and Associates, Inc., Moss Beach, California. In order to understand whether previous wetland delineations conducted at the Moss Beach site followed the protocol set forth within the 1987 Corps Manual (and various memorandums) a review of the past wetland delineation was performed. During the review, a field study that included a hydrologic study was conducted to evaluate wetland hydrology under normal circumstances. This evaluation would indicate if the wetlands were subject to Corps jurisdiction. H&C conducted four specific tasks to define normal wetland hydrologic conditions. The tasks included: (1) determination of what defined normal wetland hydrologic conditions by the Corps regulatory definition in terms of the quintessential year and the total number of consecutive days that a given location must be either flooded, ponded and/or saturated; (2) determination of what constitutes the Corps' frequently flooded (or 2-year return interval) wetland criteria for the Moss Beach area; (3) determination of how saturated a soil must be to effect anaerobic conditions; and, (4) hydrologic modeling. Using analysis from in-situ soils cores, H&C, Inc. determined whether the soils found within the 'wetland' area can saturate to effect anaerobic conditions under the Corps' normal 2-year hydrologic condition and the 1998 hydrologic year when the site was delineated.

Elrod Project, Prosser Creek, Nevada County, California. The North Fork of Prosser Creek meanders across the Carpenter Valley. A fluvial geomorphic assessment/feasibility study of the creek was conducted to assess effects of a potential bridge structure. Carpenter Valley extends several miles in a west-east direction. The width varies from about 100 yards to near 1/3 of a mile. The location of the stream has changed numerous time throughout geologic time. This is evidenced by the many oxbows and old channels on the meadow. Currently the channel is on the south side of the meadow impinging on steeper terraces. There were several locations of existing erosion downstream of the proposed bridge crossing on the inside of meander bends and these areas show a potential tendency toward meander cutoffs. Several conditions existed for this bridge crossing: geomorphology, water quality concerns and environmental permit issues for not only the bridge crossing itself but for the entire roadway length to include traffic frequency and patterns.

Payless Property Site, Tahoe City, California. The purpose of this study was to delineate and map the extent of all wetlands/Waters of the United States ("Water"), including wetlands under forensic conditions. The site is located in the study area. The study area is located on 3.16 acres, west of the "Y" intersection where California Highway 89 and 28 converge in Tahoe City, Placer County, California. The study area is contained within a 332 acre watershed which flows to the Truckee River near the terminus of Lake Tahoe. The area was composed gentle sloping terrain ranging 7.5% over the entire study area. The topography slopes toward California State Highway 89 to the east. A small area along the westerly boundary is moderately steep with 22% slopes that transform to relatively flat terrain having a 3.5% slope.

H&C, Inc. conducted on-site evaluations. A study of existing landforms as well as associated vegetation, hydrology and soil conditions was initially conducted to identify areas that would likely contain wetland and aquatic habitats. These areas were classified using the U.S. Fish and Wildlife Service's Classification System for Wetland and Deepwater Habitats. The landward extent or boundary of these habitats was further defined using methodology currently in use by the U.S. Army Corps of Engineers.

Black Point Site, Wetland Delineation, Novato, California. Use of one and two-dimensional numerical modeling from climatological and hydrological data was conducted to delineate jurisdictional wetland boundaries because above average rainfall conditions made delineating this area difficult, if not, impossible. Wetlands are delineated utilizing the U.S. Army Corps of Engineers, 1987 Wetland Delineation Manual under the normal 2-year, 24-hour return interval storm event. The 1987 Manual focuses on "hydrology" as inundation and/or saturation within 12 inches of the land surface and emphasizes that the presence of water has an overriding influence on characteristics of vegetation and soil due to anaerobic conditions. Therefore, it is generally difficult to delineate wetland areas under above or below average rainfall conditions.

The focus of the study, conducted by H&C, Inc., was to develop a method in which wetland hydrology could be assessed when above average conditions exist. The methods developed predicted a process by which long term daily climate data was utilized to create an average hydrologic period to drive the model. The area of study is known as the Black Point site and is located in Marin County, California, where above average rainfall has been experienced within recent years. A hydrologic model was developed and calibrated to 1992 precipitation data, thereby, simulating groundwater elevations within the study area. Initially, the model was used to predict surface ponded conditions in 1997, which could be independently verified. The study proved successful and further development of a 2-dimensional model was conducted to predict the degree of saturation beneath the ground surface to effect anaerobic conditions under the Corp's regulatory definition. An average precipitation year was constructed from the long term climate record and used as boundary conditions within the model to define wetland hydrology.

A numerical model was developed using the computer program SWMS_2D. With precipitation, evaporation and soil properties data, the program solves a set of partial differential equations to determine the location of the water level and the moisture content in the soil as a function of space and time. The model was 'calibrated' to the 1991-1992 water year, as this year had the most reliable water level data. With no further adjustments, the model was then used to infer soil moisture and groundwater elevation for other years. The model results were then used to define wetland hydrologic conditions at the Black Point site. Final acreage from wetland boundary determinations made by Corps personnel in 1997 and the 1997 wetland model results differed by 0.5 acre in a 40 acre site or by approximately 4%.

Foothill Partners, LLC., Re-investigation of Foothill/Virginia Site Wetland Status, Reno, Nevada. At the request of Foothill Partners, LLC., Huffman and Carpenter, Inc. conducted a re-investigation of the project area. The parcel in question was 5.8 acres in size. The purpose of the investigation was to determine the whether or not waters of the United States (WOUS) were present (in other words, that the site was a wetland). A previous delineation from another firm found the area did meet wetland criteria and therefore subject to regulation and protection.

There was concern that the water in the area came from irrigation and that the previous delineation had not accounted for the irrigation waters. The flow of irrigation waters onto the site created an atypical situation, Huffman & Carpenter, Inc.'s specialty, and makes the delineation of a wetland area more difficult. The Army Corps of Engineers has explicitly allowed that if an area displays wetland characteristics only due to irrigation, then the area will not be regulated as a wetland.

The results of the new investigation indicated that there are no jurisdictional wetlands/WOUS present on the project area.

Nevada Tri-Partners, Re-delineation of Whites Creek Meadow Subdivision, Reno, Nevada. In 1992 the Corps of Engineers performed a wetland delineation on the project site to determine the presence or absence of all waters of the United States, including wetlands. It identified approximately 38.6 acres of wetland area out of 181.66 acres in total project site. This delineation expired in 1995.

The owners requested that Huffman & Carpenter, Inc. perform a re-delineation of the area. Since the previous delineation, major impacts had occurred in the watershed. These included the construction of US Highway 580, cessation of irrigation waste water flows, and the construction of a flood control channel. With this amount of impact, the previous delineation might no longer be accurate, and a new delineation is called for.

Re-delineation results found that the cessation of waste water flows onto the project area allowed for a clearer picture of what areas on the project site actually constituted wetland areas. Huffman & Carpenter, Inc., found that at the time of this delineation, approximately 4.54 acres of the project site could be classified as wetland areas under the EPA's jurisdiction as mandated by Section 404 of the Clean Water Act.

REGULATORY PERMITTING

Diloreto Construction, Damonte Ranch Wetland and Stream Restoration Plan & Wetland Mitigation Bank, Reno, Nevada. This development consists of approximately 2,000 acres of land. Approximately 165 acres of jurisdictional wetlands and 10 miles of stream habitat are present on the property. H&C, Inc. was responsible for all aspects of the Corps permitting program to include: 1) wetland delineation and verification; 2) avoidance analysis; 3) 401 Water Quality Certification; 4) functional assessment; 5) approved Individual 404 permit; 6) NDPES Permits; and 7) a wetland mitigation bank, stream restoration and wetland mitigation plan.

Double Diamond Ranch, Reno, Nevada. This development consists of approximately 2288 total acres of areal extent. Designations within this acreage include, approximately 1025 acres of residential, 160 acres of commercial, 648 acres of industrial, 38 acres of infrastructure and 418 acres of oped spaces and parks. There are approximately 207 acres of waters of the United States (WOUS)/wetlands on the Double Diamond Development. The proposed project would potentially impact approximately 1.53 wetlands and 2.22 acres of riverine intermittent streambed will be filled, and approximately 10.14 acres of wetlands

may be potentially impacted due to the filling of WOUS C. Impacts would be mitigated by the creation of approximately 3.70 acres of seasonal palustrine persistent emergent wetland, 2.88 acres of riverine intermittent habitat and the restoration of the hydrology to 10.14 acres of seasonal palustrine persistent emergent wetland, totalling approximately 16.72 acres. The restoration of hydrology to the 10.14 acres of seasonal palustrine persistent wetland will be done via the installation of slotted 2.00" diameter groundwater wells which will provide a direct connection between the wetlands and artesian groundwater. Additionally, various underground artesian water rights will be dedicated to existing wetlands on the site in order to insure continued viability. H&C, Inc. was responsible for preparing and obtaining approval of the following: 1) permitting, and 2) mitigation plan.

Plumas-Sierra Rural Electric Cooperative (PSREC), Portola, California. At the request of PSREC, H&C, Inc. conducted an investigation of the geographic extent of possible wetland areas or other types of waters of the United States subject to U.S. Army Corps of Engineers (Corps) regulation under the Clean Water Act that could be located within the approximately four-mile corridor of the project area. A jurisdictional delineation report was prepared by Huffman & Carpenter, Inc., submitted to and verified by the Corps. The underground electrical circuit project crossed two large meadow wetland habitats and six intermittent/ephemeral channels. Huffman & Carpenter, Inc. prepared and obtained the necessary Corps permit and California Regional Water Quality Control Board water quality certification to allow for these temporary impacts. In addition, Huffman & Carpenter, Inc. prepared a Storm Water Pollution Prevention Plan as required by the National Pollution Discharge Elimination System General Permit for construction related activities.

The Founders at Grizzly Ranch, LLC, Grizzly Creek Ranch, Portola, California. H&C, Inc. was responsible for all aspects of the Corps permitting program to include: 1) wetland delineation and verification; 2) avoidance analysis; 3) 401 Water Quality Certification; 4) functional assessment; 5) approved Letter of Permission 404 permit; 6) NDPEs Permits; and 7) a wetland mitigation bank, stream restoration and wetland mitigation plan.

WATER QUALITY AND STORM WATER PERMITTING

The Rosewood Municipal Golf Course, Marsh Restoration and Wetland Mitigation Project, Reno, Nevada. This project has approximately 270 acres of land with 115 acres of jurisdictional wetlands. Of the 115 acres of jurisdictional wetlands, 57 acres were impacted by the development of the golf course. H&C, Inc. was responsible for preparing and obtaining approval of: 1) wetland delineation report and map, and obtaining Corps verification; 2) Section 404(b)(1) alternative analysis; 3) 401 Water Quality Certification; 4) an approved individual Department of the Army (Corps) Permit for various road and utility line crossings that included a Corps of Engineers approved Wetland Mitigation Plan and Nationwide Permit; 5) approved Wetland Mitigation Monitoring Program; and 6) construction implementation. This project was completed in 1991 and has satisfied success criteria for compliance monitoring.

Baytech Site, Stem Property Development Plan, Fremont, California. The Baytech site is situated on a 17.9 acre parcel of land located within the City of San Jose, Santa Clara County, California. The site is

within the Santa Clara Basin watershed, and storm water from the site drains to Coyote Creek which discharges to the south San Francisco Bay. The basic purpose of the proposed Baytech project was to develop a Research and Development Industrial facility within an existing R&D industrial park along the Highway 237 corridor.

H&C developed natural systems, and other best management practices to treat sTORM WATER runoff from the 17.9 acres of impervious surface to meet stringent water quality objectives.

Steele Enterprises, Trout Creek Restoration Project, Truckee, California. This project is situated within three watersheds: the Trout Creek, the Donner Creek and the Truckee River. The only flowing water body within the project site is perennial Trout Creek. The water quality certification included all watershed modeling, erosion control, storm and surface water quality monitoring and the development of a Chemical Management Action Plan (CHAMP) report. The Basin Plan requires that site-specific design plans provide for on-site retention and infiltration so that no substantial increase in surface runoff volume occurs as compared to pre-project runoff volumes.

Golf course design criteria included drainage designs to direct flow paths away from Trout Creek and the positioning of greens surfaces to minimize under-drain flooding. Other design features included rock-lined storm water conveyance ditches, grass-lined contour ditches, and infiltration ditches that would intercept and retain storm water runoff from impervious surfaces for the 20-year, 1-hour storm. In addition to various erosion control measures, detention ponds were designed to attenuate peak flows from the 100-year storm to pre-project levels. The design of the golf course was developed to meet the environmental constraints of the area; limit the chemicals and fertilizers to be used and their means of application; and to provide protection of surface water quality in the area. H&C, Inc. established a baseline surface water monitoring program to establish water quality objectives. H&C, Inc. ran rainfall and runoff simulations and performed watershed analysis. Watershed runoff calculations used in the selection of BMPs were modeled using the USDA-Soil Conservation Service, "Urban Hydrology for Small Watersheds (TR 55)" computer program. Potential flows to sub-basins in the pre and post-project conditions were determined and drainage flow paths in each sub-basin were examined to determine areas of potential high erosion.

The Resort at Squaw Creek, Squaw Valley, California. This project included 1,900 acres of land with 250 acres of jurisdictional wetlands. Working closely with other project team members, only 12 acres were impacted by the proposed development. H&C, Inc. was responsible for preparing and obtaining approval of: 1) wetland delineation report and map and obtaining Corps verification; 2) Section 404(b)(1) alternative analysis; 3) Department of the Army (Corps) individual permit that included a Corps of Engineers approved Wetland Mitigation Plan; 4) Nationwide Permits for minor road and utility line crossings and water quality testing facilities; 5) obtaining approved Wetland Mitigation Monitoring Program; and 6) construction of mitigation wetlands.

MITIGATION

Oro Loma Wetland Mitigation Project, San Leandro, California

Plan Objectives:

- Provide waterfowl and shorebird habitat
- Conserve endemic salt marsh flora and fauna
- Provide endangered species habitat for the salt marsh harvest mouse (*Reithrodontomys raviventris r.*) and California clapper rail (*Rallus longirostris obsoletus*)
- Control mosquito populations
- Integrate educational and recreational interests
- Limit the cost of effective, ongoing marsh management
- Encourage interagency management of biotic resources

The mitigation project provided 14.41 acres of created and preserved wetlands habitat. The preliminary design was meant to ascertain whether the prospective wetland mitigation site could achieve the in-kind wetland mitigation replacement habitat with respect to habitat type and hydroperiod.

H&C, Inc. prepared a preliminary wetland mitigation design of the selected area. The preliminary design included evaluation of the surface and subsurface soils and soil chemistry, including the hydroperiod and water balance necessary to induce wetland hydrologic conditions to achieve the desired success criteria specified by the regulatory agencies.

Once done, a final design was prepared and the site was constructed. H&C provided wetland construction management and SWPPP enforcement. After construction, H&C supervised the hydroseeding of the site and wetland shrub planting. Site monitoring will continue for several years.

The Reno-Tahoe International Airport, Steamboat Creek Restoration Project, Reno, Nevada. This project involved over 800 acres of land with 14 acres of jurisdictional wetlands of which 4.64 acres were impacted by a proposed runway expansion project. The project was completed during 1994 and the mitigation has since satisfied the final success criteria. H&C, Inc. assisted the clients by obtaining 1) wetland delineation and verification; 2) avoidance analysis; 3) 401 Water Quality Certification; 4) functional assessment; 5) approved Individual 404 permit; 6) NDPES Permits; 7) a detailed wetland mitigation plan which calls for the restoration of 3,500 feet of Steamboat Creek; 8) channel design and restoration; 9) construction implementation of 10.64 acres of mitigation wetlands and ½ mile of stream restoration; and 10) mitigation monitoring and compliance reporting.

The Carson Valley Inn, Freshwater Emergent Marsh, Minden, Nevada. This project involved a wetland mitigation plan, all design aspects of a wetland mitigation plan, construction implementation and monitoring of the created wetland system. The created wetland consisted of: 1) wetland delineation and verification; 2) avoidance analysis; 3) 401 Water Quality Certification; 4) an approved Nationwide Permit; 5) functional assessment; 6) sub-surface hydrological study; 7) design drawings; and 8) supervision of construction in environmental sensitive drainage area to the Carson River. The mitigation was constructed in April of 1991 and the five year compensatory monitoring requirement was completed in three years.

The Stanford Ranch Project, Vernal Pool and Wetland and Drainage Restoration Project, Rocklin, California. This project has 3,000 acres of land with 147 acres of jurisdictional wetlands. Of the 147 acres of jurisdictional wetlands only 15 acres will be impacted by the proposed development (due to careful project redesign). H&C, Inc. was responsible for: 1) wetland delineation and verification; 2) Section 404 (b)(1) alternative analysis; 3) 401 Water Quality Certification or waiver; 4) an approved Section 404 permit that included a Corps of Engineers approved Wetland Mitigation Plan and nationwide permits for road and utility line crossings; 5) construction implementation of wetland mitigation including construction of vernal pools and drainage swales within a vernal pool preserve; 6) mitigation monitoring and compliance reporting; 7) development and implementation of a mitigation plan for impacts to fairy shrimp; and 8) biological analysis in support of documents prepared pursuant to requirements of the California Environmental Quality Act (CEQA).

Santa Fe Pacific Partners Pipeline Company, Donner Creek Emergency Stream Restoration Project. This project consisted of a bank stabilization to protect a petroleum pipeline crossing along a stretch of Donner Creek, near the Town of Truckee, California. H&C, Inc. was able to assess the geomorphological requirements, obtain the necessary environmental permits, draft construction documents, supervise the construction activity for stream bed/bank protection and monitor project results. To more fully understand the project, H&C, Inc. estimated peak flows and flow durations based on hydrologic considerations for Donner Creek (controlled releases from Donner Lake) and outflow from Cold Creek. H&C, Inc. then determined the shear stress necessary for substrate mobilization based on pebble count data. Critical shear stresses were based on the necessary shear stress to transport bed material from the substrate. A surface water profile model, HEC-2, was used to determine the distribution of shear stresses for existing conditions for various flow rates in Donner and Cold Creek (used: expected flow duration from current two-year to 100-year flows). The combination of flows represented the hydrograph at the project site.

Input data for the analysis were gathered from a field survey of 12 cross-sections and a pebble count of existing substrate. Shear stresses on existing conditions were used to estimate current thresholds of scour or particle movement. Through this modeling effort a bank stabilization project was implemented within Donner Creek, including considerations to achieve water quality objectives as defined by the RWQCB-Lahontan Region. The bank stabilization was tested during the floods of January 1997 and remained intact while other portions of the creek were destroyed by severe erosion. In November 1997, H&C, Inc. conducted another bank stabilization project upstream and downstream of the 1995 project site, providing further stabilization for the petroleum pipeline.

A Wetland Status and Trends Analysis for the New York State Department of Environmental Conservation. Essential to the development of the appropriate wetland protection measures in New York was the development of a state-specific information base concerning the status and trends of wetland gains and losses. The purpose of this study, which was conducted by the State Department of Environmental Conservation (DEC) under a grant from EPA, was to provide wetland status and trends data for the period 1975 to 1995. The three fundamental objectives of the project were to: 1) identify quantitative and qualitative changes in the wetland resource base over the ten-year study period; 2) identify the principal causes of those changes; and 3) create a documented information base to facilitate future tracking of wetland gains and losses.

The study relied on aerial photographs and other remote sensing data, as well as ground surveys and other relevant data sources to analyze freshwater wetland gains and losses in each of six ecological zones throughout the state. Once the methodologies were validated, the ecozones were examined and a state-wide GIS database was developed using ARC/INFO to facilitate future studies of changes in wetlands in the State of New York. H&C, inc. personnel were instrumental in the identification of quantitative and qualitative changes in the wetland and ecozone classifications.

AMEX, Lassen Gold Mine, Watershed Assessment - Wetland Mitigation Project. During the development of Lassen Gold Mine, 9.4 acres of wetlands were filled. The Corps Section 404 Permit required the creation of 18.5 acres of wetlands as mitigation. H&C, Inc. developed a watershed model to assess sTORM WATER runoff for the design of snow fences¹ to capture water to maintain the mitigation wetlands. The wetlands were constructed in 1992. The Corps released Amex, Lassen Gold after only three years of monitoring because the site exceeded the success criteria. As a result of our work, a total of 31 acres of seasonal palustrine persistent emergent wetlands were created.

WATERSHED ASSESSMENTS

Tahoe Regional Planning Agency (TRPA), Stream Environment Zone Classification System. H&C, Inc. collected and analyzed site-specific data from different types of Stream Environment Zones (SEZs) within the Tahoe Basin and used this to develop a classification system and guide for the assessment of functional condition of SEZs. Data was gathered from various sources including: 1) Lake Tahoe Interagency Monitoring Program, which monitors water quality trends in the Tahoe Basin; 2) Tahoe Environmental Geographic Information System; 3) field data collected between August and November 1997; and 4) miscellaneous sources such as USGS topographic maps and aerial photographs. The classification system was developed based on how SEZs function through the interactions of hydrology, soils, geomorphology and vegetation. It provided the basis for understanding how to identify and characterize the functions of a SEZ with regards to water quality treatment. The project was conducted as a cooperative effort between the TRPA and the U.S. Forest Service (Lake Tahoe Basin Management Unit and the Toiyabe National Forest Ecology Team).

Malibu Coastal Land Conservancy, Malibu Wetland Feasibility Study, Malibu, California. H&C, Inc. was retained to assess the feasibility of restoring wetlands in the Malibu Civic Center area under a contract with the Malibu Coastal Land Conservancy (MCLC). The initial Scope of Work (SOW) for this project was comprised of two tasks: 1) prepare a water budget/balance to estimate the hydroperiod necessary for wetland restoration and/or the construction of treatment wetlands; and 2) based on the results of Task 1 as well as existing information, assess whether wetland restoration would be a feasible project within the Southern California Wetland Recovery Program using the California State Coastal

1

Snow fences are often used to make more water available for livestock and irrigation and to improve wildlife habitat. A snow fence acts to trap blowing snow and it was thought that some snow harvesting may occur. In addition to snow harvesting, water from the upgradient watershed and from mine site roadway runoff was diverted into the mitigated wetland. The water harvesting methods are mentioned here because these methods are an opportunity to increase water supplies for future wetland mitigation sites and wildlife management areas and are an example of H&C's ingenuity.

Conservancy (CSCC) project science evaluation criteria. Since water quality is MCLC's paramount concern, the feasibility of constructing treatment wetlands was studied. Nitrogen was chosen as the primary constituent for treatment to evaluate a potential concept and size of the wetland in the study, realizing that other constituents of concern like phosphorus and various potential pathogens would be considered during the design phase of the restoration project.

Dyer Mountain Ski Facility Watershed Assessment. H&C developed surface water budgets for the proposed ski facility for both the pre and post-construction conditions. The surface water budgets were prepared using existing hydrologic data and information on watershed characteristics. The surface water budgets developed in this study were tools to be used to determine net effects from the proposed development on the environment to assist with initial planning decisions.

Within this study the pre and post-construction surface water budgets were compared to analyze any potential environmental impacts that might be caused by developing this area. Potential impacts to the surface waters of the site that were assessed include: 1) increases in impervious surfaces that would concentrate surface water flows and increase velocities thereby increasing the potential for erosion; 2) changes in ET rates created by changes in vegetation cover and type, thus inducing a change in water yield; and 3) changes in snowmelt and sublimation processes because of the addition of man-made snow.

Fundacin La Puerta, Tecate River Restoration Cost Benefit Analysis, Tecate, Mexico. At the request of the Fundacion La Puerta, H&C, Inc. has prepared a preliminary cost benefit analysis to assess the least cost solution for a proposed river restoration project. Four options were examined in H&C, Inc.'s cost benefit analysis: 1) a no action plan; 2) the proposed alternative of an 11 km concrete lined channel through the town of Tecate (to gain additional land for development purposes); 3) a natural restoration project which encompasses a restored riparian/river (with treatment wetlands); and 4) a hybrid model of alternatives three and four that allow for some concrete lining and some natural restoration techniques.

ENVIRONMENTAL RESEARCH AND EDUCATION

Tahoe Regional Planning Agency (TRPA), Stream Environment Zone Condition Assessment Handbook. Following the development of the SEZ classification system H&C, Inc. developed a guide for the assessment of the condition of SEZs with regard to SEZs ability for water quality treatment. The purpose of the SEZ Condition Assessment Handbook was to: (1) identify indicators of water quality functions associated with SEZs; (2) assess whether an SEZ is properly functioning with respect to water quality parameters; and (3) provide a framework within which to develop an effective, water quality focused SEZ restoration project.

Damonte Ranch Cultural Resource Interpretive & Outdoor Environmental Educational Center. H&C, Inc. designed a regional interpretive center for the Damonte Ranch Development, which includes a park and trail system for public use. The interpretive center was developed as part of a comprehensive and creative mitigation plan to compensate for project related impacts within the Steamboat Creek watershed. It consists of an indoor facility with extensive exhibits and hands-on educational components, as well as, outdoor educational opportunities for elementary school field trips and other visitors. The interpretive

center and trail promote public awareness and stewardship by informing visitors about the land and environment, and by cultivating an understanding of how past inhabitants, pre-historic tribes and more recent man, within the last 100 years utilized the environment. The educational aspects enable present day homeowners and visitors to familiarize themselves with the history of the ranch and create a connection with and interest in the future of the ranch's open space, wetlands and stream corridors.

Silver Wing Development Wetland Interpretive Trail System. H&C, Inc. developed a project interpretive trail system that linked wetlands and drainages with the housing development that facilitated migrating songbird habitat and the projection of rare spring dune complexes. The wetland areas are protected and maintained by the homeowners association and provide year round water and feeding stations. Educational brochures and bird watching materials to include interpretive signs were developed that allow homeowners to become stakeholders for their own small wetland preserve.

HABITAT/IMPACT ASSESSMENTS AND RESTORATION

Costco Companies, Inc., Giant Garter Snake Habitat Project. A wetland/habitat design plan was created to mitigate impacts caused by the elimination of wetlands during creation of a retail project and associated drainage improvements in Sacramento, CA. These impacts included loss of habitat of the federally-listed threatened giant garter snake (*Thamnophis couchi gias*). H&C, Inc. performed a detailed hydrologic analysis of the mitigation site. HEC-RAS was used to develop two hydrologic scenarios: (1) a scenario for the existing site conditions, to establish surface water profiles under 100-year flood conditions; and (2) a scenario for the design plan which included lowering the site elevation to the proposed design conditions, breaching the hibernacula levee to increase the areal and temporal extent of the perennially wet marsh lands, and building giant garter snake hibernacula on the intact levee above the level of the site 100-year floodplain determined in the baseline scenario. Of particular interest in this modeling exercise was the impact of the construction of the hibernacula on the elevation of the floodplain, if any. The predictive numerical model indicated that the impact on floodplain elevation caused by the proposed design would be less than 0.01 foot and therefore, the addition of one-acre hibernacula necessary for giant garter snake winter habitat at the site would not have measurable effect on flood stage.

Truckee River Yacht Club, Rocks in the River, Truckee River Restoration Project, Reno, Nevada. With the goal of enhancing fish habitat and aesthetics within the Truckee River, H&C, Inc. examined the potential effects of boulder emplacement within the section of the stream channel between the Sierra Street and Virginia Street bridges, adjacent to the Reno City Redevelopment Truckee River walk. Fish habitat was poor because this section of the Truckee River flowed fairly uniformly through the 125-foot stretch, without the boulder pools and eddies needed to produce variability. During high flow periods, few pools and eddies existed for fish to rest and feed and during low flow periods, shallow water warmed and failed to hold the oxygen necessary for fish survival.

H&C, Inc. used the HEC-2 analysis to model pre and post-project river flood profiles to determine potential flooding due to "random" boulder placement versus the creation of riffle pools. The HEC-2 analysis showed that the creation of riffle pools would increase the 100-year flood stage by 0.19 feet more than random boulder placement. H&C, Inc. recommended that 10 to 15 boulders be placed randomly in the deepest part of the stream channel (the "thalweg") in an S-shaped pattern and/or in small groups. The

design would enable pool formation and variability, maximize the creation of fish habitat by avoiding pool overlap, potentially decrease water temperature, and create a more natural and aesthetic river scene. As a result of our recommendations, scour pools have been created increasing a healthy fish habitat within the downtown Truckee River corridor.

Nevada Division of Wildlife, Wetland Conservation Plans for State Wildlife Management Areas. The Nevada Division of Wildlife (NDOW) obtained a grant from the U.S. Environmental Protection Agency in 1994 and subsequently contracted with H&C, Inc. to prepare a Wetland Conservation Plan applicable to State Wildlife Management Areas (WMAs). The preparation of the Wetland Conservation Plan consisted of extensive literature review;

- data collection;
- gap analysis;
- conducting interviews with local and state personnel;
- conducting stakeholder meetings;
- preparation of an ACCESS database;
- strategic planning;
- a static GIS database; and
- written reports.

The State-controlled and managed wetlands are presently incorporated into a wildlife management area system, and for the scope of this project included the Overton, W.E. Kirch, Key Pittman, Mason Valley, Humboldt, Fernley, Scripps, Alkali Lake and Franklin Lake Wildlife Management Areas. The purpose of the overall project was to develop a Wetlands Conservation Plan that delineates the mechanisms to achieve a goal of no net loss of wetlands by area and function and that will act as a policy guide to NDOW in the preparation of comprehensive plans for wetlands in the wildlife management areas system. The long-term objective is to enhance and increase wetlands' quantity and quality on these wildlife management areas. To accomplish this objective, a written policy document and GIS inquiry system were developed. The GIS system accommodates storage of natural resource data and provides an analysis and management tool to assist in the formulation of management choices and strategic planning guidelines for the WMAs. The structure of a GIS system for data management was determined in conjunction with an interagency Wetlands Technical Advisory Committee. Color infrared aerial photographs were taken at all study areas and field surveys were conducted to ground truth aerial photographs and topographic maps, and to conduct a wetland functional assessment of all areas. This information was then spatially linked with the GIS database containing various WMA facts to be used in an intranet by employees for management purposes.

GRANT WRITING

Washoe County, Nevada. Huffman & Carpenter, Inc. authored a grant proposal to obtain Section 604(b) funding for Washoe County. The grant monies were used to plan stream restoration by studying creek bank stability on Steamboat Creek. Approximately 22 miles of stabilization and best management practices were recommended.

GOLF COURSES

Rosewood Lakes Golf Course, Reno, Nevada. Huffman & Carpenter, Inc. worked with the golf course architect and regulatory agencies to obtain permits allowing fill in wetlands in return for on-site wetland restoration, enhancement and creation. Based on these environmental enhancements, the Rose wood course has won an Environmental Law Institute national award. The following is a list of the services performed by Huffman & Carpenter, Inc.: 1) CHAMP/IMP; 2) Water Feature Design; 3) Water Quality Treatment, Best Management Practice Design and Implementation; 4) Eco-Farming “Green” Approach to include Soil Investigations; and 5) Watershed Assessment for Project Related Impacts.

Truckee Falls Golf Course. Huffman & Carpenter, Inc. worked with the golf course architect and regulatory agencies to obtain permits allowing fill in wetlands in return for on-site wetland restoration, enhancement and creation.

Restoration and enhancement for the golf course design criteria included drainage designs to direct flow paths away from Trout Creek and the positioning of greens surfaces to minimize under-drain flooding.

Other design features included rock-lined storm water conveyance ditches, grass-lined contour ditches, and infiltration ditches that would intercept and retain storm water runoff from impervious surfaces for the 20-year, 1-hour storm. In addition to various erosion control measures, detention ponds were designed to attenuate peak flows from the 100-year storm to pre-project levels.

The design of the golf course was developed to meet the environmental constraints of the area, limit the chemicals and fertilizers to be used and their means of application; and to provide protection of surface water quality in the area. H&C, Inc. established a baseline surface water monitoring program to establish water quality objectives. H&C, Inc. ran rainfall and runoff simulations and performed watershed analysis. Watershed runoff calculations used in the selection of BMPs were modeled using the USDA-soil Conservation Service, “Urban Hydrology for Small Watersheds (TR 55)” computer program.

Potential flows to sub-basins in the pre- and post-project conditions were determined and drainage flow paths in each sub-basin were examined to determine areas of potential high erosion.

Lahontan Ranch Golf Course. Huffman & Carpenter, Inc.’s work on the Lahontan planned development included working with the golf course architect and the regulatory agencies to obtain permits allowing fill in wetlands on the golf course portion of the site as well as restoration, enhancement and creation of wetlands and water features. The following services were performed by Huffman & Carpenter, Inc.: 1) CHAMP/IPM; 2) Water Feature Design; 3) Water Quality Treatment, Best Management Practice Design and Implementation; and 4) Watershed Assessment for Project Related Impacts.

Wingfield Springs Golf Course. Huffman & Carpenter, Inc. worked with the golf course architect and regulatory agencies to obtain permits allowing fill in wetlands in return for on-site wetland restoration, enhancement and creation. The following services were performed by Huffman & Carpenter, Inc.: 1) CHAMP/IMP; 2) Water Feature Design; 3) Water Quality Treatment, Best Management Practice Design and Implementation; 4) Eco-Farming “Green” Approach to include Soil Investigations; and 5) Watershed Assessment for Project Related Impacts.

TRIBAL WORK

The Pyramid Lake Paiute Tribe - Winnemucca Lake Restoration Plan Feasibility Study. At the request of the Pyramid Lake Paiute Tribe, H&C performed a feasibility study to assess the potential of restoring Winnemucca Lake Wetland Habitat by increased flows from the Truckee River. The feasibility study encompassed the study design, field data collection, laboratory analysis of soils and soil chemical data, and a review of historic flow data and various maps showing the pre-diversion river and areas for future wetland mitigation banking and wetland habitat. Results of this study were presented to the United States Congress with a petition from the Tribe to attain increased flows.

The Pyramid Lake Paiute Tribe - Numana Fish Hatchery Treatment Wetlands, Sutcliff, Nevada. H&C, Inc. was awarded a contract to design, construct and monitor a 1.3 acre wetland for nitrogen removal. The source of water was nutrient-rich effluent from the Numana Fish Hatchery. Tasks successfully completed by H&C, Inc. included the following: 1) wetland delineation and verification; 2) avoidance analysis; 3) 401 Water Quality Certification; 4) an approved nationwide permit; 5) design of an educational trail system; 6) project design and construction implementation of a constructed wetland for wastewater treatment; and 7) mitigation monitoring and compliance reporting.

The Walker River Paiute Tribe - Walker River, Schurz, Nevada.. H&C, Inc. has helped the Walker River Paiute Tribe (Tribe) develop a Comprehensive Water Quality (CWQ) Program for the Walker River Indian Reservation. The Reservation covers approximately 300,000 acres in west central Nevada and includes the lower portion of the Walker River to its terminus in Walker Lake. The long term goals for the CWQ Program are to assess existing water quality and to establish water quality standards for surface water, groundwater, and other significant water bodies within the Reservation boundaries. The primary monitoring program which is currently being implemented is supported by a 106-Grant from the Environmental Protection Agency (EPA) Region IX. The ultimate objective of the Tribe is adoption of Tribal Water Quality Standards, establishment of water codes, and overall management of water resources within Walker River Paiute Reservation.

As a part of the CWQ Program for the Reservation, H&C, Inc. has performed several investigations and prepared the following documents: Surface Water Quality Assessment and Wetlands Report; Ground Water Monitoring Program; Surface Water Quality Monitoring Program; Aquifer Sensitivity Analysis report; Non-point Source Pollution Investigation Report; and Wellhead Protection Plan.

In addition to work on the Water Quality Program, H&C, Inc. performed tasks including river geomorphology and historical data research for special projects.

The Walker River Paiute Tribe - Walker River, Schurz, Nevada - Wellhead Protection Plan. As a part of the non-point source pollution investigation for the Reservation, H&C prepared a Wellhead Protection Plan (WHPP). The primary goal of the WHPP was to protect the Reservation's drinking water supply. An auxiliary goal of the WHPP was to protect other ground water uses (such as irrigation and stock watering) and surface water quality. A wellhead protection area (WHP Area) is the area on the ground surface which must be managed to protect the ground water below. A WHP Area is delineated by

design would enable pool formation and variability, maximize the creation of fish habitat by avoiding pool overlap, potentially decrease water temperature, and create a more natural and aesthetic river scene. As a result of our recommendations, scour pools have been created increasing a healthy fish habitat within the downtown Truckee River corridor.

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SUMMARY

Ms. Carpenter is a Wetlands Hydrologist who has extensive experience in Great Basin wetland systems. Her responsibilities include all aspects of design and implementation of wetland regulatory permitting, wetlands delineations, constructed wetlands design, wetland mitigation plans and wetland monitoring plans, best management plans, river/stream restoration plans, and natural resource evaluations. She has particular expertise in modeling wetland hydrology, both for delineating wetland boundaries and designing wetland mitigation projects. Ms. Carpenter also has experience with many surface water rainfall, water quality and stochastic models, such as SWMM, WASP5, QUAL2E.

In addition to her technical skills, Ms. Carpenter has developed innovative permitting strategies for clients with construction projects involving wetlands. For example, she originated a unique wetlands corridor plan, and proposed mitigation bank, for the Truckee Meadows area near Reno, Nevada. This area is under considerable development pressure, with piecemeal losses of wetlands attributable to private development, as well as public works projects (e.g., Nevada Department of Transportation construction of the Highway 395 expansion).

In order to develop this plan, Ms. Carpenter researched the historic alignment of some of the critical surface water bodies in the Truckee Meadows area and determined that restoration of some of these water bodies to their historic alignment, within a designated meander belt, would serve several purposes, including: (1) provide mitigation for wetland impacts associated with one of the major proposed developments in the area; (2) laying the foundation for an entrepreneurial mitigation bank; (3) providing valuable, biologically rich, open space within what would otherwise be a fully developed urban environment; (4) improving water quality in the Steamboat Creek sub-watershed of the Truckee River; and (5) allowing some flood control capacity to be developed in a more aesthetically pleasing manner than that normally provided by traditionally engineered structures.

Ms. Carpenter has also been instrumental in the development of a non-profit in-stream flow bank for the Truckee River. Ms. Carpenter is helping to define the free market incentives that will allow for flow augmentation in low flow periods. Specifically, she is working out a flow release system whereby up-stream storage rights can be released during low flow periods to help achieve water quality objectives through certain river reaches in downtown Reno.

Ms. Carpenter has also been responsible for the design of various wetland mitigation projects, including both seasonal and perennial wetland habitats including hydrologic design of both surface water and groundwater driven wetland systems. For surface water driven systems she utilized various surface water models and 'snow fences' to capture snow fall that would have otherwise evaporated to sustain wetland complexes. For groundwater driven systems she has employed a series of groundwater flow models to predict groundwater elevations. Several of her design projects have met success criteria prior to the Corps five year monitoring period.

Ms. Carpenter has developed a wetland delineation technique for problem areas that allows the Corps to review project areas under past climate scenarios so that the Corps can evaluate the project site under normal, below normal and above normal rainfall conditions. Additionally, she has conducted several stream restoration projects and bank stabilization projects utilizing a combined Stumm, Rosgen, Hec2 approach where she models the stream sections or reaches with Hec2 and measured Mannings "n" and then utilizes Rosgen methods along with other fluvial geomorphological restoration principles.

Ms. Carpenter's experience prior to joining Huffman & Carpenter, Inc. includes design work on the Reno/Sparks Wastewater Treatment Expansion Project (Constructed Wetland Treatment Option). Additionally, Ms. Carpenter conducted an algal growth potential study to assess effects of wastewater effluent to augment water supplies for natural Nevada wetlands. She was responsible for work plans, field data collection, data interpretation and statistical analysis, and final study results technical memorandums.

Ms. Carpenter's duties as a geochemist on the Nevada Carbonate Aquifers Program in Carson City, Nevada included assisting in well site selection, aquifer pump tests, and performing field chemical analyses. She was responsible for planning field trips, site selection, sampling for specialized geochemical analyses, maintaining all chemical supplies and lab equipment, data manipulation and statistical interpretation for water quality data collection programs.

Ms. Carpenter has also worked with a Nevada utility company in the Truckee and Carson River Systems regarding water rights research for the acquisition and transfer of water rights, including preparation of deeds, leases, and abstract documentation. Her background includes experience in Nevada state water law and western water law in appropriation and riparian water rights for surface and groundwater, natural resource evaluations and environmental impact statements.

WETLANDS TRAINING COURSES TAUGHT

UNIVERSITY OF CALIFORNIA - BERKELEY EXTENSION

Assistant Instructor. Wetlands delineation techniques using the Corps 1987 Wetland Delineation Manual. The 1987 Manual focus on wetland delineation utilizes the multiple parameter approach for technical delineations of aquatic and wetland boundaries under federal regulatory jurisdiction.

UNIVERSITY OF NEVADA - RENO

Guest Instructor. For the Hydrologic Science Graduate Program, Small Watershed Hydrology Class where Ms. Carpenter teaches on "Wetland Hydrology" and wetlands delineation techniques using the Corps 1987 Wetland Delineation Manual.

EXPERIENCE

Huffman & Carpenter, Inc.	1991 to present
<i>Senior Wetlands Hydrologist</i>	
CH2M HILL	1989 - 1991
<i>Wetlands and Surface-Water Hydrologist</i>	

UNR-Reno, Nevada <i>Hydrologist/Statistician for Office of Business and Economic Development</i>	1989
U.S. Geological Survey <i>Hydrologic Technician/Geochemist</i>	1987 -1989
Nevada Consultants, Inc. <i>Water Rights Technician</i>	1985 -1987
Sierra Pacific Power Company <i>Land and Water-Rights Technician</i>	1978 - 1983

EDUCATION

M.S., Hydrogeology/Hydrology with specific emphasis in the modeling of wetland hydrologic conditions, University of Nevada, Reno.

B.S., Hydrology Major with Chemistry Minor, University of Nevada, Reno.

CONTINUING PROFESSIONAL EDUCATION

APPLIED FLUVIAL GEOMORPHOLOGY (ROSGEN STREAM CLASSIFICATION SYSTEM).
A five day intensive training course on the geomorphology and the role of the river within the watershed, extrapolation and prediction of hydrologic characteristics, sedimentation, stream classification, stream restoration, and watershed management implications.

INTRODUCTION TO FEDERAL PROJECTS AND HISTORIC PRESERVATION LAW
A three day training course on the National Historic Preservation Act (NHPA) which protects historic properties. Section 106 of the NHPA requires special review of federal and federally assisted activities that could affect historic including Section 404 of the Clean Water Act, specially 33 CFR 325, Appendix C.

ADVANCED SEMINAR ON PREPARING AGREEMENT DOCUMENTS UNDER SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT.
A three day training course and advanced seminar for cultural resource/historic preservation that focuses on how to draft and organize agreement documents used to conclude project review under Section 106 of the NHPA and its implementing regulation, 36 CFR Part 800 (- Memorandum of Agreements, and Programmatic Agreements, and agreement based determinations of no adverse effect, and other related authorities as the Native American Graves Protection and Repatriation Act and the National Environmental Policy Act.)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

American Geophysical Union
American Water Resources Association & Nevada Water Resources Association
Society of Wetland Scientists, Professional Wetland Scientist #0001147

CONFERENCE PRESENTATIONS -PUBLICATIONS

Carpenter, L.A., An Approach for Delineating Hydrologic Boundaries of Wetlands by Simulating Long-Term Climate Conditions, August 2000, Master Thesis, University of Nevada, Reno, Master of Science Hydrology/Hydrogeology.

Carpenter, L.A., Performance standards/final success criteria - wetland mitigation experiences from the Great Basin and east slope of the Sierra Nevada, presented at the Society of Wetland Scientist, Reno riparian conference - October of 1998.

Carpenter, L.A., Erosion Control Techniques and Best Management Practices for Construction Activities in Environmentally Sensitive Areas in the Lake Tahoe and Truckee River Watersheds, presented for the California Regional Water Quality Control Board, San Francisco District, at the Storm Water Pollution Prevention Plan Training Workshop - August 1997.

Carpenter, L.A., McKay, Alan, Fordham, John W., Myers, Thomas, Non-profit Instream Flow Bank to help achieve water quality criteria, Truckee River Watershed, Nevada., presented at the Nevada Water Resources Association - Nevada Water Conference - February 15, 1996.

Carpenter, L.A., Rhea, R.A., Huffman PhD., R.T., The use of the disc permeameter in wetland delineations, presented at the Nevada Water Resources Association - Nevada Water Conference - March 14, 1995.

Carpenter, L.A., Rhea, R.A., Broadway, J.R., Huffman PhD., R.T., Comparison of the Wetland Delineation Methodology and the Technical Criteria that Would Induce Wetland Conditions, presented at the Fall 1994 American Geophysical Union conference, December 1994 and the Nevada Water Conference - March 14, 1995.

Carpenter, L.A., Warwick PhD., John, Spinogatti, Daniel, Efficacy of Low Cost Wetland Treatment in improving lower Truckee River Water Quality, presented at the Fall 1994 American Society of Civil Engineers conference in Atlanta, Georgia.

Carpenter, L.A. A Case Study of Wetland mitigation and functional assessment methodology on Steamboat Creek, Reno, Nevada, Truckee River Watershed, presented at the Nevada Water Conference in Las Vegas, Nevada in March of 1994.

Carpenter, L.A., Dunaway, D., Development, Wetlands, and Watersheds: A case study to integrate multiple objectives utilizing wetland and watershed analysis. Case Study presented at the Nevada Water Conference February 1993.

Carpenter, L.A., Wetlands regulated on irrigated agricultural lands. Paper presented at the Nevada Water Conference February 1993.

Carpenter, L.A., *Preserving Nevada's Wetlands*. A Poster Session. February 1991., Huffman and Associates, Inc., Reno, Nevada.

Carpenter, L.A., *Isotopic Composition of High Altitude Recharge Waters in Southern and Eastern Nevada, August 1988*. (In progress) U.S. Geological Survey-WRI, Carson City, Nevada.

Carpenter, L.A., Thomas, J.M., and Lyles, B.F., *Chemical and Isotopic Data from Wells, Springs, and Streams in Carbonate-Rock Terrane of Southern and Eastern Nevada and Southeastern California, 1985-88*. U.S. Geological Survey, Open-file Report 89-422, Carson City, Nevada.

Carpenter, L.A., Briscoe, K., *Abstract for the Orr Ditch Final Decree for the USA, Plaintiff, vs. Orr Water Ditch Company, et. al., Defendants*. Sierra Pacific Power Company, Reno, Nevada, 1982.

Appendix K
Vitas of Technical Advisory Team

ROBIN RIERDAN

9232 Lapeer Ct. Santee, CA 92071

Phone: (619) 448-1779 email: r2rierdan@cox.net

Academic History

1976 Universidad Autonoma de Guadalajara, Guadalajara, Mexico, Summer

1979 BA Anthropology, U.C. San Diego (Revelle College)

Anthropology: Native American Studies and Socialization of Children, Minor in Teacher Education Program

- **Master of City Planning, Georgia Institute of Technology,**
Specialization in economic development and real estate. Thesis: Nevada Revolving Loan Fund for Small Businesses

Professional History

1979-81: Classroom Teacher, Oakley Middle School, Oakley, California

Team-taught in 4th and 5th grades, all subjects, special interest in California History and Native American studies.

1984-86: Economic Development Specialist, Nevada Office of Community Services, Carson City, NV

Assisted in the creation and financing of small businesses throughout the state. Worked with lenders, both public and private, including commercial bank, and the Small Business Administration. Emphasis on fixed asset financing. Developed and administered the State of Nevada's Small Business Revolving Loan Fund.

1986-89: Director, Rural Economic Development Programs, Nevada Commission the Economic Development

Held two gubernatorial appointments by Governors Dick Bryan, (future U.S. Senator Bryan) and Bob Miller. Traveled with, and provided direct briefing and staffing, for both governors.

Responsible for the economic development of all rural counties and the cities and towns within those counties.

***Community Development:** Created the Silver Star Communities Program, a planning and implementation process for rural counties and cities that focused on local governance/community development, tourism development, existing businesses and industrial attraction. Developed multi-year strategic plans and one-year action plans that addressed the specific needs of the communities. Developed the development authorities within each county, provided community assistance, technical assistance and funding.*

Other related activities:

- *Worked with officials from the Carson Colony (Washoe), Duckwater Reservation (Shoshone) and the Schurz Reservation (Paiute).*

- *Worked with the Federal Reserve Board officials (San Francisco) on issues of lending and redlining in rural communities.*
- *Supported the business needs of large and small corporation, including relocation efforts of major US corporations, such as American Cyanamid and Aerojet General, and the business needs of rural businesses from small hotel/restaurants to local manufacturers to the 'Ranches'.*
- *Worked on the planning and creation of the Great Basin National Park.*
- *Worked with the National Trust for Historic Preservation on the National Main Street Program.*

***Policy Development:** Contributed to the Nevada Ten-Year Strategic Plan for Economic Diversification, created the Science and Technology policy for Rural Nevada, developed state legislation for rural Nevada, worked with the Legislative Council Bureau, testified before the Nevada State Legislature on the needs of Rural Nevada. Contributed to the Strategic Plan for the Superconducting Supercollider.*

***Grants:** Developed allocation criteria, made allocation recommendations, provided administration for a \$1 million grant pool to support the development authorities. Provided consulting services as well as evaluated the success of these organizations. Wrote major grants to the Economic Development Administration for the creation of an Economic Development District in rural Nevada. Grant reviewer for the Nevada Community Development Block Grant Program.*

***Missions, Conferences and Meetings:** Lead the Rural Mission to Washington, DC. bringing approximately 15 mayors and county commissioners to Washington DC for a week of meetings, conferences and lobbying, meeting primarily with agency heads of the Department of Commerce and Transportation. Developed and lead the annual Rural Roundtable which brought rural economic and community development staff and activists together to discuss issues of mutual concern and work with nationally recognized experts on rural development. Lead a trade mission of Japanese officials on a tour of cattle facilities in Nevada in an effort to open up and increased trade in both beef and alfalfa. Represented agency at variety of social events for visiting dignitaries and elected officials as well as Nevada elected officials.*

***Advertising:** Helped select the Commission's advertising agency, develop major advertising campaign and select media buys for both rural and urban counties.*

***Travel:** Represented the State of Nevada throughout the United States. Met and worked with officials and elected representatives from the rural West, including Montana, Utah, Colorado, Arizona and California. Also worked with Governor Bill Clinton and the Arkansas Economic Development Department.*

***Administration:** Directed staff and did organizational development and budgeting for the Rural Economic Development Program.*

2001-02 Project Manager, San Diego River Park-Lakeside Conservancy

Responsibilities included the development of a fledgling nonprofit focusing primarily on fundraising. Wrote major grant requests to for Propositions 12 and 13 grand funds. Prop 12 grant focused on the creation of a large soccer complex for 'at-risk' youth. The Prop 13 grant requested funds to construct an off channel, palustrine wetlands to enhance water quality in the Riverview Water District well fields. Grant funded at: \$1.29 million Developed a long term

funding source using eScrip. EScrip program currently generates approximately \$2600 monthly and will eventually rise to \$5,000 monthly.

Environmental Activities

1994-present: Co-Founder, Preserve Wild Santee, Santee, California

Founded local organization dedicated to preserving 2400 acres of high quality habitat – the Fanita Ranch. Recruited over 1,100 local members, ultimately obtaining the supporting votes of over 6500 residents in a referendum in 1999.

Educated and recruited the public on the value of habitat by precinct walking, educational forums, editorial writing, and signature collection. Developed brochures and mailers. Managed dedicated volunteers. Raised over \$19,000 in campaign funds for to stop development on the Fanita Ranch, ultimately defeating a developer's \$280,000 campaign in 1999. 65% of Santee voters supported the referendum and stopped the project.

1999: Lobbyist, Land and Water Conservation Fund, Southern California Coalition

Generated over 100 letters of support for full funding for the Federal Land and Water Conservation Fund from city councils, school districts, water districts, churches, high tech businesses, building and tourism industry associations.

1999-2000: Member, County Supervisor Dianne Jacob's Environmental Advisory Group

Other Activities and Skills

1989 Member of the Douglas County Decennial Grand Jury

Author of the Grand Jury Report

1993 Chairperson, Sycamore Canyon School Site Council

1995 Member, Santee School Systems Fiscal Committee

1993-97 Citizen Representative, Santee Town Center Committee

1986-87 President, League of Women Voters, Carson City Nevada

Responsible for the 'Alternate Energy Home Tour,' which raised \$5,000 towards supporting the employment of a League legislative lobbyist.

1990-1999 Political Campaign Activities, Campaign manager for City Councilperson Jim Bartell's successful city council race, worked on Santee School Bond, worked on Fanita Ranch initiative (failed) and referendum (succeeded)

Skills by Marriage

Access to world-class earth scientists, including hydrologists, aqueous geochemists, wetland scientists, biologists, geologists, atmospheric scientists, and groundwater specialists.

Languages: Spanish

Publications

Fantastic Flyer, 'The Gifts' July 1994

Odyssey Magazine: 'The 17,000 Kilometer Mystery: How DNA Solved the Mystery of Loggerhead Turtle Migration Routes', March 1996, 'Just Add Iron', 'Father of Greenhouse Warming' and 'Rain Babies,' April 1996

Faces Magazine: 'The Signs of Language', September 1996

Honors

Sierra Club, Rookie Activist of the Year, 1994

Governor Bob Miller proclaimed August 18, 1989 as Robin Rierdan Day in Nevada

Georgia Institute of Technology, Outstanding Planning Student, 1984

Valedictorian, Santana High School, 1974

Curriculum Vitae of Deborah Jones

PROFESSIONAL EXPERIENCE

Executive Director, San Diego River Park – Lakeside Conservancy (May 2001 – Present). Work directly with Board in developing and implementing river park vision. Provide Board policy guidance and implement Board policies and directives. Keep Board informed. Manage and direct all activities of the Conservancy, including managing financial and human resources. Provide leadership and guidance to organization. Communicate with members at-large. Represent organization to outside agencies, organizations, and media. Actively and strategically fundraise through grant writing, donor solicitation, and donor relations.

Graduate Research Assistant, Department of Geography, San Diego State University (1998/1999 academic year). Conducted research for environmental accounting case study aggregating local government and agency expenditures made in defense of environmental quality. Co-authored two articles for publication based on research results.

International Financial Analyst, OmniTracs International, Qualcomm, Inc. (June 1996 – Sept. 1998). Responsible for preparing International Division's financial reports, including actuals, budgets and forecasts; prepared joint-venture consolidations, maintained international customer relations and collection; managed team of associate financial analysts. Reported to Finance Director.

Assistant Financial Controller, Intrum Justitia B.V., Holland and Germany. (July 1991 – April 1995). In Holland, part of head-office financial team whose responsibilities included group financial reporting, multi-currency translations and inter-company reconciliation, financial analysis, including cash flow, budgeting, and annual reporting to shareholders. Reported to CFO. In Germany, worked at sister office as liaison to head-office for financial reporting; supervised local bookkeepers. Reported to Finance Director.

Management Accountant, Grand Metropolitan, B.V., Holland (Aug. 1990 – June 1991). Assisted in preparation of monthly, quarterly, and annual financial statements for management, including Profit and Loss, Balance Sheet, and Cash Flow. Reported to Finance Manager.

Other Related Work Experience:

Donor Scheduler, San Diego Blood Bank (August 2002).

Project Analyst, Judith A. Pappe, CPA (Jan – May 1996).

Instructor, Basics of Investing, US Military, Frankfurt Base, Germany (1993).

Intern, Intellibanc Corporation and Hughes Aircraft (Summers of 1988 and 1989).

President and Co-founder, Pacific Rim Club, CSULB (1987 – 1989).

EDUCATION

Master's of Arts, Geography, San Diego State University (2001). Concentration in Environmental Quality and Natural Resource Management. Thesis: *Estimating the Cost of Beach Closures Using Hedonic Price Analysis*.

Bachelor's of Sciences, Business Administration, California State University Long Beach (1990). Concentration in Finance.

Other Related Training Courses:

- Fieldstone Foundation's Executive Learning Group (2003)
- Land Trust Alliance's Organizational Management Series for Land Trust Executive Directors (2002).

Curriculum Vitae of Deborah Jones

(Other Related Training continued)

- Nonprofit Management Solutions workshops and seminars: Fundraising, Nonprofit Accounting, Direct Mailing Techniques (2001, 2002).
- UCSD Extension, Natural Resource Management Program courses: Conservation, Ecology, San Diego's Natural Environment (1997).

PUBLICATIONS

Jerrett, Michael, Serge Rey, Christian Dufournaud, and Deborah Jones (forthcoming). "Accounting for the Environmental "Bottom Line" along the U.S. Mexico Border." *Annals of the Association of American Geographers*.

Jerrett, Michael, Serge Rey, Christian Dufournaud, and Deborah Jones (2002) Environmental Accounting along the U.S.-Mexican Border. In *The U.S.-Mexican Border Environment: Economy and Environment for a Sustainable Border Region: Now and in 2020*. Editor: Paul Ganster. San Diego: San Diego State Press.

LANGUAGES: Working knowledge (in order of proficiency): Dutch, German, Spanish, French.

RELATED MEMBERSHIPS:

- California Native Plant Society (Board Member, 2001-present; Secretary, 2002 -present),
- Friends of Los Penasquitos Canyon Preserve (Member, 1997 – present),
- Audubon Society (Member, 1997 – present)

RELATED VOLUNTEERING:

- San Diego River Park: Member of initial conceptual planning team.
- Friends of Los Penasquitos Canyon Preserve: Sensitive plant surveys, wildlife tracking, exotic plant removal, and community outreach.
- Friends of Rose Canyon: Leader of nature walks.
- Friends of Lopez Canyon: MSCP compliance research.
- San Diego Audubon Society: Annual Christmas bird count and community outreach.
- San Diego Museum of Natural History: Bird count for Bird Atlas.
- I Love a Clean San Diego: Community outreach.

HOBBIES: • Birdwatching • Cycling • Diving • Gardening with native plants • Traveling internationally

References available

Michael Beck
569 La Cresta Blvd.
Crest, CA 92021
Phone: (619) 846-3003

Education:

- Bachelor of Science, Biology - 1976
University of California Riverside

Professional and Volunteer Positions (chronological):

- San Diego Director, Endangered Habitats League
Founding Board member, Board of Directors 1991-
San Diego Director, 1993--
- County of San Diego Planning Commissioner 1993-
Chairman, 1997-1998
- Instructor, Issues in Conservation
University of California San Diego Extension 1996--2001
- League of Conservation Voters, San Diego Chapter
Founding board member, Board of Directors 1994--
President 1998-2001
- Director, State of California Planning Commission Association
Region 3. 1997/1998
- Board member, Back Country Land Trust 1999-2002
- Board member, California Oak Foundation, 1999-
- Founding board member, Earth Discovery Institute, 2000-
- Founder and Chair, San Diego River Park-Lakeside Conservancy
2001-
- Founder and Chair, San Diego River Park Foundation, 2001

Michael Beck
569 La Cresta Blvd.
Crest, CA 92021
Phone: (619) 846-3003

Michael Beck is a founding Board member and the San Diego Director of the Endangered Habitats League, with a membership that includes over 30 conservation organizations throughout southern California dedicated to ecosystem protection, sustainable land use planning, and conflict resolution.

The primary focus of the League's present work is the preservation of biodiversity through the establishment of an ecosystem reserve in the bio-region of southern California and Baja California. This work is coordinated with community based, sustainable growth management and land use strategies.

Among other duties, Mr. Beck is also a member of the County of San Diego Planning Commission and Chairman of the San Diego River Park Foundation and San Diego River Park-Lakeside Conservancy.

Robert Hutssel

Functional summary

Extensive experience in community affairs and government operations as well as environmental programs and education along with riparian restoration projects and open space preservation

Employment

2001 – Present San Diego River Park Foundation

Director - Special Projects

Responsible for development and management of programs and projects of the San Diego River Park Foundation

- Liaison to community groups and organizations including the San Diego River Coalition, and responsible for public presentations
- Project lead on the San Diego River Park Conceptual Plan and Master Plan efforts
- Chair of the San Diego River Coalition Project Committee and Technical Advisory Group
- Responsible for Project and Program Grant development

**2000 – 2001 City of San Diego; Office of the Mayor
Policy Advisor**

- Responsible for policy development and analysis for Mayor on a variety of issues including Park and Recreation, seniors, education, economic development, CDBG funding, and land use issues
- Liaison to City's Senior Affairs Advisory Board, City staff on Park and Recreation issues, ad hoc committees on housing and homelessness

Summary of qualifications

**1994-2000 City of San Diego; Office of the Mayor
Director of Constituent Services/Senior Staff member**

- Responsible for all constituent relations for Mayor's Office
- Development of internship program
- Policy Advisor
- Supervisor for 5 members of Mayor's staff
- Ombudsman/problem solver for Mayor
- Assisted with development of Mission Valley Preserve and other open space/wild land reserves

1986-1993 Med-O-Lark, Inc.: Maine & Boston

Program Director/Executive Director

- Responsible for operations of private residential school/summer program
- Responsible for staff of approximately 100
- Responsible for promotions and client relations for 240 students per term
- Responsible for program development
- Responsible for facilities management for rural Maine site
- Ropes Course/Leadership Training program development and training

1984-85 Med-O-Lark, Inc.; Maine & Boston

Aquatics Director/Maine Challenge Director

Program Director for Environmental Education and Wilderness Experience Program

- Trip Leader
- Curriculum developer
- Staff training for client safety, nature appreciation
- Program Manager for comprehensive recreation aquatics program

Related experience

1993-current

Member of county-wide non-native plant removal action team which has develop new community-based efforts including training of community members, project design, and management

- Extensive riparian restoration experience
- Certified for herbicide usage
- Certified for chain saw usage
- Planning/permitting for habitat restoration with resource/regulatory agencies, California Native Plant Society, California Exotic Pest Plant Council, etc.
- Plant and animal surveys
- Invasive non-native plant management

Boards & Commissions

Board Member, Friends of Mission Valley Preserve

Board Member, Black Mountain Citizens Advisory Committee (for City of San Diego's Black Mountain Open Space)

Board of Trustee, San Diego Archaeological Center

Secretary / Treasurer, San Diego Presidio Park Council

Acting Co-Chair, San Diego River Watershed Workgroup

Member of County Wetlands Task Force

Member of Regional Workbench Consortium

Member of Project Clean Water – Legislative and Regulatory Issues
Technical Advisory Committee

Member of Project Clean Water – Comprehensive Planning Technical
Advisory Committee

Awards received

- 1996 Volunteer of the Year
Los Penasquitos Canyon Preserve
- 1996 Special Recognition
United States Secret Service
- 1997 Special Recognition
County of San Diego for Riparian Restoration Efforts
- 1999 Special Recognition
University of Phoenix
For meritorious service to community
- 2002 Friend of the Urban Corps Award

University of California, San Diego; Revelle College
Urban Studies and Planning, emphasis in Environmental Design
minor in Economics

Other Interests/activities

Certified Ropes Course Instructor

Member of San Diego Historical Society, Friends of Penasquitos Canyon
Preserve, Otay Valley Regional Park, California State Parks Foundation,
Audubon Society, Alumni Association UCSD

Sailing, hiking, canoeing, and rafting

Preservation of local heritage sites of regional and national significance

Jo Ann Anderson
7452 Herschel Avenue
La Jolla, California 92037
anderson@sandiegoriver.org

619 297-7380 Office
619 890-8274 Cell

858 459-3552 Fax

Experience:

The San Diego River Park Foundation, San Diego River Coalition

2001-Present ***Executive Director, The San Diego River Park Foundation,
Chair, San Diego River Coalition***

The Scripps Research Institute/Scripps Foundation for Medicine and Science

1990-2002: **Associate Director of Development, The Scripps
Research Institute, Vice President, Scripps Foundation for
Medicine and Science.**
*Strategic planning for institutional initiatives funding
Major Gifts solicitation
Capital Campaign/Mini Campaign management
Special Events
Donor, Corporate and Foundation Relations
Volunteer Management
Proposal, correspondence, brochure text writing
Travel, meetings, solicitation of major gift prospects
Special emphasis on Corporate and Foundation Relations*

1981- 1990 **Executive Assistant to the President, The Scripps
Research Institute**
*Served as primary staff to the President for program
development, faculty recruitment and relocation, capital
equipment acquisition ,corporate and major donor
relations.*

Jo Ann D. Anderson
Page 2

University of California, San Diego, Medical School and Hospitals and Clinics

- 1971-1980 **Management Services Officer/Administrator,**
 Department of Surgery, UCSD Medical School
 (Encompassing nine clinical specialty divisions)
-Managed all staff personnel positions in department, including classification review, budgeting, recruitment, assignment and performance review.
-Managed department state, hospital, contract and grant and clinical income funds. Established and supervised central control of extramural funds. Prepared and negotiated annual department budgets. Authored guidelines and procedures for management and distribution of faculty clinical income.
-Managed all departmental academic records, reviews.
-Supervised preparation of materials supporting academic actions.
-Administered faculty salary incentive plan. Developed and applied complex formulae for calculation and distribution of individual and group clinical income.
- 1970-1971 **Staff Officer/Administrator for Clinical Programs,**
 Department of Psychiatry, UCSD Medical School
Negotiated County contracts for establishment of UCSD psychiatric inpatient and outpatient clinical services.
Worked with program chiefs to establish systems and procedures of clinical programs, supervised budgeting, accounting and cost recovery systems Established staffing patterns, new classifications for mental health professions..
- 1966-1970 **Staff Assistant** to Director of Hospitals and Clinics
Administration of program and facilities development at UCSD Medical Center.

Scripps Clinic and Research Foundation

- 1963-1966 **Assistant Director of Development**
-Donor cultivation
-Managed annual giving
-Managed Special Events
-Communications

Jo Ann D. Anderson
 Page 3

Recent Training:

CASE conference on Fundraising from International Constituencies, 1999
CASE conference on Foundations and Corporate Relations, 1997
Institute for Charitable Giving Major Gifts Roundtable, 1994, 1995
CASE Summer Institute in Educational Fundraising, 1993
Major Gift Fundraising, The Russ Reid Company, 1992
Planned Giving, Linda Moerschbacher, 1991

Community Service:

Court Appointed Special Advocate, Juvenile Dependency Court (since 1995)
Board of Directors, Voices for Children (non-profit community services) 1997-
2001
Advisory Board, McCaleb Dance Company 1999-
Founding Board of Directors, The San Diego River Park Foundation 2001-
Board of Directors, San Diego River Park-Lakeside Conservancy 2001-

Michael Dettinger

MICHAEL D. DETTINGER

U.S. Geological Survey

Scripps Institution of Oceanography, Dept 0224

9500 Gilman Drive, UC San Diego, La Jolla, CA 92093-0224

(858) 822-1507; mddettin@usgs.gov

<http://tenaya.ucsd.edu/~dettinge>

Academic History

1977 -- BA Physics, U.C. San Diego (Revelle College)

Summa cum laude, Phi Beta Kappa.

1979 -- MS Civil Engineering, Massachusetts Institute of Technology

"Numerical Modeling of Aquifer Systems under Uncertainty: A Second Moment Analysis"

1991-- MS Atmospheric Sciences, University of California, Los Angeles

"Interannual and Interdecadal Variability of United States Temperatures"

1997-- Ph.D., Atmospheric Sciences, University of California, Los Angeles

"Variations of Continental Climate and Hydrology on Diurnal-to-Interdecadal Scales"

Teaching History

1974—Tutor, lower-division "Introductory Physics (Mechanics)" course, UC San Diego.

1978—Teaching Assistant, graduate-level "Ground-water Hydrology" course, MIT.

1982-83--Team taught 2 terms of "Field Methods in Hydrology" graduate-level course, UN Reno.

1986—Master's degree committee, Paul McCabe, University of Nevada, Reno.

2000—Graduate Western-Water Colloquium, University of Colorado, Boulder, invited seminar.

2002—Graduate Hydrology Program Colloquium, University of Nevada, Reno, keynote speaker.

2002—Doctoral committee, Jessica Lundquist, Scripps Institution of Oceanography.

Professional History

1979-81: Engineer-scientist, Camp Dresser & McKee, Inc., Walnut Creek, California: *Consulting Water-resource evaluations, ground-water flow/transport modeling, and water quality management studies for DOE, Guam EPA, water-quality districts, and chemical industry.*

1981-89: Hydrologist, U.S. Geological Survey, Nevada District, Carson City, Nevada: *Ground-water Assessments of geochemistry in bedrock and alluvial aquifers; ground-water flow modeling; regional evaluations and synthesis of hydrogeologic framework and flow systems, eastern Great Basin; and District Ground-water Specialist, including program development and review, and representation of USGS to public forums, Legislative committees, and State Engineer.*

1991-94: Hydrologist, U.S. Geological Survey, San Diego, California: *Hydroclimatology*

Study of sensitivity of water resources of California to interannual-decadal climate variations and change by analysis of historical hydroclimate and simulations of snowmelt/watershed responses.

1994-97: Research Hydrologist, California District, USGS, San Diego, CA: *Hydroclimatology*

Continuation of studies of sensitivity of water resources of California to interannual-decadal climate variations and change by analysis of historical hydroclimate and simulations of snowmelt/watershed responses. Analyses of freshwater-inflow variations to San Francisco Bay and Delta Analysis of large-scale basis and predictability of global, hemispheric, and Western US hydroclimatic variations using historical and paleo-records of atmospheric circulations, trace gases, ocean temperatures, streamflow, ground water, and water quality. Modeling and nonlinear dynamics of land-air interactions through planetary-boundary layers. Co-developer of UCLA Singular-Spectrum-Analysis Toolkit, 1995.

1996-97: Research Hydrologist, USGS, at NOAA/Climate Diagnostics Center, Boulder, CO

Study of hemispheric-scale ENSO effects on streamflow. Initial medium-range forecasts of Sierra Nevada snowmelt and streamflow. Co-developer of CDC Global Streamflow dataset.

1997-2001: Research Hydrologist, California District, USGS, & Research Associate, Climate Research Division, Scripps Institution of Oceanography, La Jolla, CA: *Hydroclimatology*

Continuations of global, Western, and Sierra Nevada hydroclimatology of precipitation and streamflow using historical and paleo-records of atmospheric circulations, trace gases, ocean temperatures, streamflow, ground water, and water quality. Global- to watershed-scale climate downscaling. Medium-range streamflow forecasting, Sierra Nevada, and long-range streamflow forecasting nationwide. Analysis and simulations of ground-water/surface-water sensitivities to climate variations. Simulation of Sierra Nevada watershed sensitivities to projected climate changes.

2002-present: Research Hydrologist, Branch of Western Regional Research, USGS, & Research Associate, Climate Research Division, Scripps Institution of Oceanography, La Jolla, CA

Continuations of global, Western, and Sierra Nevada hydroclimatology of precipitation and streamflow using historical and paleo-records of atmospheric circulations, trace gases, ocean temperatures, streamflow, ground water, and water quality. Long-range national-scale streamflow forecasting. Evaluation of climate-change projections for changes in large-scale Pacific-basin climate modes and resulting streamflow sensitivities. Development and implementation of new and innovative hydrometeorological monitoring methods, Yosemite National Park and Santa Margarita Ecological Reserve. Team leader, CALFED climate-science white paper. Co-developer, USGS San Francisco Bay Place-Based-Science Climate-Change Scenarios project.

Other Professional Activities

- **Team leader**, CALFED Bay-Delta Program white paper on CALFED's climate-science needs, 2001-present.
- **Organizer and chair**, "Climate Variability and CALFED" session, First CALFED Ecosystem Restoration Science Conference, Sacramento, CA, October 2000.
- **Program chair and fundraiser**, Pacific Climate (PACLIM) Workshops, 1998 (El Nino 1998), 1999 (Climate and Society), 2000 (Planning for the 2000s), 2001 (Decadal Climate Variations of the Last 1000 Years), 2002 (Solar Influence on Climate), and 2003 (Integrated Mountain Science)

Michael Dettinger

- **Vice President's National Performance Review Award** for leadership in Mojave Desert Ecosystems planning efforts, 1996. **Water Resources Division representative** on USGS Steering Group for Mojave Desert Ecosystem Initiative Activities, and **Leader** of the Interagency Physical Sciences Subgroup of Mojave Desert Science and Data Management Interagency Working Group, 1995-96 .
- **Co-chair** for NASA Working Group on Climate Responses to Direct Solar Forcings, Institute for Study of Planet Earth, Tucson, AZ, March 2000.
- **Climate group co-leader**, National Research Council Committee on Hydrologic Science's Workshop on Groundwater Fluxes across Interfaces, May 2002.
- **Convener** of special sessions on Natural Variations of Groundwater Systems at Fal AGU Meeting, 2000.
- **Co-organizer and chair**, "Atmospheric Circulations and the Hydrology of the Pacific Rim" session, American Water Resources Association Annual International Symposium, Honolulu, HI, June 1995.
- **Hydroclimate representative**, USGS National Ground-water Levels Network Committee, 1995-97. **Keynote speaker**, USGS Western Region Ground-water Availability Workshop, November 2000.
- **Organizer** of 1995, 1996, & 2000 USGS Water Resources Division Hydroclimatology Workshops (1995, Hood River, OR; 1996, La Jolla, CA; 2000, La Jolla, CA). **Invited briefing** to USGS Policy Council, "Climate Variability and Runoff Prediction", 1999.
- **Reviewer** on USGS Research Grade Evaluation peer-review panel, Surface-Water Discipline, Spring 1999. **Review-panel member**, USGS Geologic Division's annual "Multi-program workshops on the arid southwest" funding program, 2000-2001. **Member** of the national-level Internal Review Team for the USGS Water Resources Division Strategic Plan, Reston, VA, October 1997.
- **Member** of USGS national committee for Report to Congress on a Program for Periodic Assessments of the Nation's Water Availability, Fall 2001.
- **Associate Editor**, Water Resources Research, 1998-2000. **Peer reviewer** for Climatic Change, Journal of Climate, International Journal of Climatology, Geophysical Research Letters, Journal of Hydrometeorology, Journal of Applied Meteorology, Water Resources Research, Journal of Geophysical Research, and various grant programs (e.g., NASA, NOAA, WESTGEC, WRRCs), ongoing.
- **Consulting Editor**, April 1996 issue of Odyssey Magazine (children's science magazine), major theme: "Taking the Earth's Temperature: Too Hot or Not?" **Invited reviewer**, Environmental Defense Fund's "Climate Change and Los Angeles' Water Supply" report, December 2000.
- **Contributor**, California Department of Water Resources, Forecast Methodology Review, 1999-2000.

- **Recent invited outreach presentations to:** California Snow Cooperative Survey Workshops, 1997 thru 2001; National Water Resources Forum, 1998; keynote speech for Third National Conference of the National Hydrologic Warning Council, 1999; National Park Service Pacific West Region Annual Meeting, 2000; NASA Earth Sciences Innovations Showcase, 2001; State of San Francisco Estuary Conference, 2001; Desert Tortoise Council, 2002; and Sierra Nevada Science Conference, 2002, and San Diego Environmental Forum "Climate Change Impacts and San Diego," 2002.

- **Recent Collaborators:** David Peterson, Gregory McCabe, Anne Jeton, Randall Hanson, David Naftz, Jan vanWagtendonk, and Robert Webb, USGS; Daniel Cayan, Noah Knowles, Jim Simpson, Anthony Westerling, and Warren White, Scripps Institution of Oceanography; Michael Ghil and Ferenc Varadi, UCLA; David Battisti, U. Washington; Henry Diaz and Jeff Whitacker, Climate Diagnostics Center; Malcolm Hughes and David Meko, U. Arizona Treering Laboratory; David Stahle, U. Arkansas Treering Laboratory; Kelly Redmond, Western Regional Climate Center; Lynn Ingram, UCB; Norman Miller and Jinwon Kim, LBL; Timothy Brown, Climate Ecosystems and Fire Applications Center; Frank Gehrke, California Cooperative Snow Surveys; Michael Mann, U. Virginia; Robert Wilby, University of Derby, UK; Myles Allen, Rutherford Appleton Lab, UK; Pascal Yiou, Laboratoire des Sciences du Climat et de l'Environnement, France; Patrick Ng'ang'a, Texas AMU-C; and Jose Marengo, Instituto Nacional de Pesquisas Espaciais, Brazil.

Michael Land

10190 Palm Glen Drive, Unit 63; Santee, CA 92071
619-749-4619 (home) michael-land@cox.net

Educational History

1992 B.S., Chemistry, Juniata College, Huntingdon, PA

Specialized Training

1994 Ground-water principles, USGS National Training Center
1995 Isotope hydrology, USGS National Training Center
1997 Geochemistry for ground-water systems, USGS National Training Center
1997 Applied borehole geophysics - alluvial settings, USGS Workshop, Los Angeles, CA
1998 Quality control sample design and interpretation, USGS Portland, OR
1999 Principles & application of dating of young ground water, USGS Sacramento, CA
2001 Hexavalent chromium in ground water, GRAC Workshop, Glendale, CA
2002 Introduction to GIS Arcmap, USGS Workshop, San Diego, CA

Professional History

1992–2003 Hydrologist, U.S. Geological Survey – San Diego, CA
 - design of regional water-quality monitoring networks
 - collection of inorganic, metal, VOC, and isotopic data
 - geochemical flow-path reaction modeling
 - supervise in-house laboratory operations

1991 Environmental Laboratory Technician, WMMC – Pittsburgh, PA
 - track, composite, and analyze field samples
 - identify job waste streams and recommend TSDF
 - prepare analytical reports; data entry

Community Service

1988 – 1994 Assistant Scoutmaster, Boy Scouts of America
1996 – 2003 Lector, Guardian Angels Catholic Church

Organizations

1995 American Chemical Society
1998 American Geophysical Union
1999 National Ground Water Association

Publications

Land, M. , Reichard, E.G. , Crawford, S.M. , Everett, R.R., Ground-water quality of coastal aquifer systems in the West Coast Basin, Los Angeles County, California, 1999-2002: U.S. Geological Survey Water-Resources Investigations Report, *in review*

Reichard, E.G. , Land, M. , Crawford, S.M. , Johnson, T. , Everett, R.R. , Kulshan, T. , Ponti, D.J., Halford, K.L. , Johnson, T.A. , Paybins, K.S. , Nishikawa, T., Geohydrology, Geochemistry, and Ground-Water Simulation-optimization of the Central and West Coast Basins, Los Angeles County, California: U.S. Geological Survey Water-Resources Investigations Report, *in review*

Dawson, B.J. , Belitz, K. , Land, M. , Danskin, W.R. , Stable isotopes and volatile organic compounds along seven ground-water flow paths in convergent and divergent flow systems, Southern California, 2000: Water-Resources Investigations Report, *in review*

Land, M. , Everett, R.R. , Crawford, S.M., 2002, Geologic, hydrologic, and water-quality data from multiple-well monitoring sites in the Central and West Coast Basins, Los Angeles County, California: U.S. Geological Survey Open-File Report 01-277, 178 p.

Land, M. , Rosenbauer, R.J. , Lorenson, T.D. , Montrella, J.J., 2001, Pore-water geochemistry and hydrostratigraphy at two continuously cored sites in Long Beach, CA : Geological Society of America Annual Meeting, Cordilleran Section, 97th, Universal City, Calif., April 9-11, 2001.

Shelton, J.L.; Burow, K.R.; Belitz, Kenneth; Dubrovsky, N.M.; Land, M. , Gronberg, J. , 2001, Low-level volatile organic compounds in active public supply wells as ground-water tracers in the Los Angeles physiographic basin, California, 2000: U.S. Geological Survey Water Resources Investigations Report 01-4188, 36 p.

Izbicki, J.A. , Clark, D.A. , Pimentel, M.I. , Land, M. , Radyk, J., Michel, R.L., 2000, Data from a thick unsaturated zone underlying intermittent streams in the Mojave Desert, San Bernardino County, California: U.S. Geological Survey Open-File Report 00-262.

Land, M., Crawford, S.M., Anders, R.A., 1999, Geohydrology and Geochemistry of the West Coast Basin, Los Angeles County, California: Implications for coastal watershed management and planning: Coastal Zone 99 Symposium, 27-29 July 1999, San Diego, CA

Land, M., Crawford, S.M., and Hanson, R.T., 1999, Seawater intrusion and control in the Dominguez Gap, Los Angeles, California: Eos, Transactions of the American Geophysical Union, v. 80, no. 46, p. F351; San Fransisco, CA

Williams, C.F. , Land, M. , Reichard, E.G. , Crawford, S.M. , Beyer, L.A., Grubb, F.V., 1999, Coupled thermal and hydrologic investigations of ground-water flow in the Los Angeles Basin: American Geophysical Union Meeting, 13-17 Dec 1999, San Fransisco, Ca.

Reichard, E.G., Crawford, S.M., Paybins, K.S., Martin, Peter, Land, M.T., and Nishikawa, Tracy, 1999, Evaluation of surface-water/ ground-water interactions in the Santa Clara River Valley, Ventura County, California: U.S. Geological Survey Water-Resources Investigations Report 98-4208, 58 p.

Land, M. , Paybins, K.S. , Reichard, E.G., 1998, Use of inorganic and isotopic water-quality data to evaluate the source and movement of ground water in the Central and West Coast Basins, Los Angeles County, California: American Geophysical Union Meeting, 26-29 May 1998, Boston, MA

Reichard, Eric G. , Land, M. T. , Paybins, K. S. , Crawford, S. M. , Nishikawa, T., 1996, Geohydrologic processes and ground-water management in the Central and West Coast Basins, Lo, Eos, Transactions, American Geophysical Union

Rees, T.F., Bright, D.J. , Fay, R.G. , Christensen, A.H. , Anders, R.A. , Land, M., 1995, Geohydrology, water quality, and nitrogen geochemistry in the saturated and unsaturated zones beneath various land uses, Riverside and San Bernardino Counties, California, 1991-1993: Water-Resources Investigations Report 94-4127, 267 p.

Appendix L
Awarded Prop 13, Small Communities Grant,
Watershed Protection Grant Program

PART A – COVER PAGE

STATE WATER RESOURCES CONTROL BOARD
SFY 2002 Costa –Machado Water Act of 2002
Chapter 6, Article 2, Watershed Protection Program and Chapter 7, Article 2, Non Point Source Control Program

Application Number 109

Project Region: RWQCB 9

PROJECT TITLE: Restoration and Recharge in the San Diego River Park: A Demonstration Project

PROJECT DIRECTOR: **Jeanne Swaringen**

June 6, 2002

LEAD APPLICANT OR
ORGANIZATION **Riverview Water District**

TYPE OF AGENCY **Local Public Agency**

STREET ADDRESS: **11769 Waterhill Road**
Lakeside, CA 92040

PHONE NO.: **619 561 1333**

FAX NO.: **619 561 1659**

EMAIL ADDRESS: jsrwd@earthlink.net

FEDERAL TAX ID NO.: **956005890**

PROJECT TYPE: Small Communities, Watershed Program

LEGISLATIVE INFORMATION:

Senate District: 36

Assembly District: 77

US Congressional District: 52

RWQBC OR SWRCB CONTACTED REGARDING THIS PROPOSAL:

RWQCB Contact: Bruce Posthumous

Work: 858-467-2964

Date Contacted: April 17, 2002

RWQCB Contact: Dat Quach. PE

Work: 858-467-2978

Date Contacted: April 17, May 15, June 3, 2002

COOPERATING ENTITIES:

San Diego River Park – Lakeside Conservancy

11769 Waterhill Road

Lakeside, CA 92040

Contact Person: Robin Rierdan

Phone: 619 448 1779 email: r2rierdan@cox.net

California State Coastal Conservancy

1330 Broadway Suite 1100

Oakland CA , CA 94612
Contact Person: Marc Beyeler (510 286 4172) mbeyeler@scc.ca.gov

San Diego County Department of Environmental Health
1255 Imperial Avenue,
San Diego, CA 2101-7493
Teresa Brownyard (619) 338-2410 teresa.brownyard@sdcounty.ca.gov

San Diego River Park Foundation
PO Box 149
La Jolla, CA 92038
Rob Hutsel, Project Manager (619) 224 2758 info@SanDiegoRiver.org

Huffman & Carpenter, Inc.
700 Smithridge Drive, Suite 102-A
Reno, NV 89502
Lori Carpenter, MS, PWS (775) 828-1991 lori@nvwetlands.com

City of San Diego, Storm Water Program
1970 B Street, MS 27A, San Diego, CA 92102
Drew Kleis (619) 525-8623 akleis@sandiego.gov

San Diego State University
Institute for Regional Studies of the California
5500 Campanile Drive
San Diego, CA 92182-4403
Suzanne Michel, Ph.D (619) 594-5423 smichel61@cox.net

WATERBODY/WATERSHED: 18070304
GPS COORDINATES: N 32° 51'22 W 116° 56'24
FISCAL SUMMARY:

Prop 13 Funds Requested: \$2,000,000
Other Project Funds: \$400,000
Total Project Budget: \$2,400,000

CERTIFICATION

I certify under penalty of perjury that the information I have entered on this application is true and complete to the best of my knowledge and that I am entitled to submit the application on behalf of the applicant (if the applicant is an entity/organization). I further understand that any false, incomplete, or incorrect statement may result in disqualification of this application. By signing this application, I waive any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent provided in this RFP.

Applicant Signature:

Date:

Print Name of Applicant: **Jeanne Swaringen**

PART B – PROPOSED SCOPE OF WORK (Part B not to exceed 5 pages)

GOALS

The goal of the proposed project is to acquire the approximately 5 acres on which the Riverview Water District wells are located and construct an off channel palustrine wetland and riparian area. The objectives are: 1) to improve both the quality of the water drawn into the municipal wells and in the San Diego River, 2) to increase the amount of recharge, 3) to improve habitat for threatened and endangered species, 4) to be a demonstration project for subsequent work within the 100 acres targeted for restoration as part of the San Diego River Park in Lakeside, and 5) provide for public outreach and education by implementing the Ranger Project in the local high schools and through direct mail campaign to local residences.

BACKGROUND

The San Diego River in Lakeside has been sand mined for nearly 100 years. For much of its recorded history it has periodically experienced catastrophic flooding during the winter months. (See Appendix 4) Although the river remained 'dry' through much of the summer months, through flows and high water tables allowed for significant dry land agriculture during the early part of the century. The river was dammed to form El Capitan Reservoir in 1935 and then again on the north fork at San Vicente Creek in 1944 for the purposes of flood protection and water supply. These dams drastically reduced through flows and the viability of agriculture and dramatically contributed to loss of habitat, degraded water quality, and loss of recharge to the Santee/El Monte aquifer which underlays Lakeside. During the intervening years, development increased contributing to increased urban runoff and storm water flows.

In 1978 and 1980 the area experience more catastrophic flooding. The Upper San Diego River Improvement District (USDRID), a redevelopment district, was formed as a response and a plan for the channelization of the river developed. The plan established a river floodway and was adopted by the County of San Diego. That plan allowed for sand mining of flood plain, the reclamation of the land with fill to raise it out of the floodway. After certification as flood free and flood safe, the land was designated for industrial purposes. Community members have long advocated for the creation of a river park. The community concerns were expressed about the unsightly nature of industrial uses and potential contamination to the groundwater from industrial spills and the need for more recreation opportunities in the community. In 2000, the RiverWay Specific Plan was approved. That plan allows for both park and industrial uses.

Lakeside is one of the few communities in San Diego County to rely on groundwater for a portion of its municipal needs. The cost of this water, at \$89/acre-foot, is substantially lower than the cost of imported water and it gives the community an economic benefit that few San Diego communities enjoy. The Riverview Water District, a small water district, has an easement for 3 wells on private land within close proximity to the San Diego River. They pump approximately 390 gallons per minute for 21.5 hours daily. The water has relatively high levels of TDS, nitrogen and magnesium and must be blended with imported water at a rate of 1:1, ground water to imported water to achieve drinking water standards. In the middle of 1999, MTBE contamination was detected in the wells and the well field was shut down. The district started to purchase water from the Padre Dam Water District, a local water wholesaler. This caused extreme financial hardship for the district. The Riverview Water District sued the gas stations responsible for the contamination and won. The proceeds from the suit will be used to construct a treatment facility to remove the MTBE from the water. Even with the success of that facility, the water pumped from these wells will still be high in nitrates and TDS and will still require blending.

Increasing the amount of recharge available to the Riverview well field, protecting and improving the water quality of the water pumped from the well will provide tangible economic benefits to the Riverview Water District. It costs \$89/acre-foot for well water and \$565/acre-foot for imported water. Any increase in recharge/groundwater supply or a increase in the well water to imported water blending rate will produce substantial cost savings for the district and their ratepayers. Additionally, improvements to habitat provide non-tangible benefits to the State's wildlife conservation efforts.

The Riverview Water District well field is located on a vegetated 5 acres, part of an approximately 100 acre parcel owned by CalMat, a resource extraction company. The land borders a pond, one of the remaining sandpits that line the river to the north, and State Route 67 to the south. This property also is the receiving area for a small drainage area that regularly floods local residences before it flows under SR 67 via storm drains and onto the proposed project site before flowing into the San Diego River proper. The remaining 95 acres consists of empty industrial pads. (See Part E)

Well logs reveal a very porous soil structure in the alluvial deposits near the river. The wells are located approximately 30 feet above the level of the ponds and the well logs show water at approximately 30 feet below the level of the well. The water flowing to the wells is in essence through flows from the San Diego River water. Basic hydrologic calculations indicate that even a small 3-4 acre wetland would communicate efficiently with the Riverview Water District wells and may provide substantial treatment for water pumped from their wells. (Appendix 2)

The Riverview Water District is working in conjunction with the San Diego River Park – Lakeside Conservancy (the Conservancy). The Conservancy is a local non-profit working to create a river park within the boundaries of the USDRID planning area. Their goal is to acquire undeveloped land to provide community facilities and wetland/habitat areas. The 5 acres in question are part of nearly 100 acres on the south side of the river targeted for acquisition by the Conservancy. The Conservancy plans to restore the land as wetlands and riparian habitat to improve and enhance water quality in the river, increase recharge, slow flood flows and support the reestablishment of threatened and endangered species such as the least Bells vireo and the flycatcher. This project is the demonstration project for this larger effort. The restoration of those 95 acres will be more complex. It will require the removal of 95 acres of fill, the redesign of the Los Coches Creek discharge point and working within the existing hydraulics of the river plan. The knowledge acquired as part of this initial 5-acre restoration project will inform and facilitate the planning process for the restoration of the remaining 95 acres beyond providing immediate benefits to the Riverview Water District.

PROPOSED WORK TO BE PERFORMED (Start with Task 4)

SCOPE OF WORK

The basic concept supporting the scope of work is very simple; to acquire nearly 5 acres bordering an existing pond, lowering the level of the land by two to three feet to allow water from the pond to flood the area and then create a treatment wetland. Simple in concept, complicated in detail.

Under optimal conditions, approximately four acres of the project site will be devoted to the wetlands themselves. (The remaining acre would be used for roads, berms, maintenance and the existing pump houses.) The most efficient and cost effective design is to create four cells or ponds to treat the water. Although the design will be an engineered constructed wetland, it will have a very natural appearance. The ponds will be constructed so that water serpentine from one elevation to the next and finally into cell four, the rapid infiltration basin. Lining with silty clay deposits found on site may be utilized to seal ponds one through three as necessary. These cells can hold up to 600,000 cubic feet of water at any given time. Water would flow out of the existing large sandpit/pond on the river into the wetlands. This water would flow between each cell for between three to five days. At any given moment each cell would hold 150,000 cubic feet of water. Cell four would be a rapid infiltration basin and would be used to recharge the cone of depression created by the drawdown from the Riverview Water District's three nearby pumps. The Riverview Water District's pumps, when operational, will pump at 390 gallons per minute. That converts to approximately 68,000 cubic feet per day. Conservative calculations suggest that, for reasonable percolation rates for the wetland in the rapid infiltration basin, approximately 80% of the pumpage could, in the future, be supplied by water percolating down from constructed the wetland. (See Appendix 2)

Due Diligence and Acquisition Although the land in question is vegetated, and that vegetation is no more than 25 years old. The area has been sand mined for many years and subjected to catastrophic flooding. The due diligence process will require hazardous materials testing, two appraisals, detailed survey and mapping and a title report. If no serious hazardous materials are found, the land tenure will be acquired. The site is part of a larger 25-acre parcel.

Detailed Feasibility Following acquisition, a consultant will be retained to begin the in complete a feasibility study of the constructed wetland. The tasking table at the end of this section outlines the activities to be completed as part of this effort. If the project is deemed feasible, all necessary permits will be obtained and the consultant will move forward with the development of Engineering Plans and Specifications. The feasibility analysis will thoroughly explore permeability to determine the precise level of communication between well field and the wetlands. A water balance will be determined and a flow rate from the pond to the wetland will be established under a variety of seasonal conditions.

Design The wetlands' primary function will be to accept water from the pond bordering the project and treat that to improve water quality. The wetland also will be designed to accept and treat winter storm water flows, which currently

collect south of SR 67 and discharge on to the project site during storm events. Although current testing of water quality from the Riverview Water District shows that nitrogen is of primary concern, the wetland will be designed to address other water quality issues as identified in the proposed 303(d) listing for the San Diego River. Those water quality issues include: dissolved oxygen fecal coliform, and phosphorous. The watch list for the San Diego River includes benthic community degradation, benzene, chlordane, eutrophication, exotic vegetation, (water hyacinth, arundo sp., tamarisk, sp) methyl tertiary-butyl ether (MTBE) and trash. To the degree possible, the wetlands will be designed to mitigate for these most pressing issues. With the exception of benzene, and chlordane, the remaining contaminants and issues have been observed to a great or lesser degree in the surrounding water bodies and land.

Construction The existing configuration of the proposed site possesses some of the features necessary to create a palustrine wetland and riparian area. The area has well established stands of willow and other native riparian species but it has arundo, eucalyptus as well as tamarisk. It is basically bowl-like in shape and has an upland ledge near the freeway where the wells are located. It is anticipated that project will combine soil removal, removal of non-natives and the planting of native species appropriate for both wetlands and upland treatment. If appropriate, it will also have a gating structure to meter the flow of water both to the site from the river. Construction will expand the existing bowl to nearly 4 acres. The current elevation of that land will be lowered by the removal of soils so that it will be constantly flooded throughout the year. The precise level of the wetland will be determined as part of the feasibility report.

Part of the consultant's contractual obligations will be to provide a management manual. Although wetlands provide a 'low tech' solution to water quality issues, they need some level of management to keep them functioning at a high level.

Monitoring The success of the project will be determined through monitoring. This monitoring will include chemical analysis, photo monitoring, a survey on threatened and endangered species and an examination of draw down records. Comprehensive water quality tests will be taken at a variety of locations. Those locations would include, an existing monitoring well east and 'upstream' from the project, at a control point near the existing pond, grab samples from wetland and river/pond surface water and ground water pumped from the well field. The Riverview Water Districts existing QAPP will be used as a base. Photo monitoring will be employed to follow the progress of the wetlands. It will be based on the guidelines published by the State Water Resources Control Board. A survey of threatened and endangered species will be added in year 3 to determine if the area has been re-colonized by least Bell's vireo and other threatened and endangered species. Lastly, well logs will be examined to look at the levels of draw down in the wells during their normal operation to determine if the wetland has been successful in increasing the amount of recharge available to the wells. Should the project not perform as well as expected, a contingency fund has been established to assist in the correction of areas identified as in need of improvement.

Public Outreach and Education A three pronged outreach program is planned to disseminate scientific information on wetlands and riparian areas and develop great public understanding of the natural hydrologic systems – including their functions and values, how they are lost and the choices associated with their protection and restoration.

The highlight of this effort will be the establishment of the Ranger Program at one or all of the three local high schools. Lakeside has three high schools; El Capitan, Lakeside's traditional high school part of the local high school district, River Valley High School a charter school of elementary school district and Summit School, part of the county juvenile court program serving 'at-risk' youth. All of the high schools have expressed an interest in the Ranger Program.

The Ranger Program, developed at nearby West Hills High School as a part of their honors biology course, meets all of the curriculum standards set forth by the State of California for biology. This authentic assessment program highlights water quality testing, habitat restoration, tracking of native species, and macro invertebrate assessment. Final projects consist of an in class 'river science fair.' The proposed project would encourage students with a strong interest in the San Diego River to present their research at the Great San Diego Science Fair.

Other outreach programs will include a 'Wetlands Celebration' at the completion of the project. Local dignitaries and elected officials will be invited as will the press and the public. A sign will be erected facing SR 67 to give the project some visibility. Lastly, the project will develop a brochure describing the project and discussing how they can take steps to protect the river, its surface and groundwater and well as habitat and native species. It will be mailed to every resident within the

'Slum and Blight Area,' all of the homes and businesses served by the Riverview Water District as well as all of the supporters of the River Park in Lakeside.

<p>Task 1: Project Administration 1.2 Quarterly/Monthly Progress 1.5 Contract Summary Form,1.6 List of subcontracted tasks, Good Faith Effort, quarterly/monthly utilization reports,1.7 Subcontractor Documentation 1.8 Expenditure/Invoice Projections,1.9 Project Survey Form</p>	<p>From month 1 and on going until the end of the contract in month 36</p>
<p>Task 2: CEQA/NEPA documents and Permits if applicable 2.2 CEQA/NEPA Documentation – Initial Study and Addendum Permits – Evaluation of Federal, State, and local environmental permits (Corps – 404 Permit, EPA/SWRCB 401 Water Quality Certification to include all aspects of the NPDES permit (SWPPP), USFWS, Section 7 consultation if necessary, CDFG/Section 1600 - Streambed Alteration Agreement, Review by State Lands Commission – Potential Lease of State lands application, and local permit requirements such as grading permit, etc. Deliverable: Initial Study and Addendum, Permit Review Report</p>	<p>Month 1 to Month 4</p>
<p>Task 3: Quality Assurance Project Plan (will submit for review and approval)</p>	<p>Month 1 to Month 5</p>
<p>Task 4: Due Diligence 4.1 Survey property, 4.2 Title, Report, 4.3 Appraisals, 4.4 Hazardous Material Survey - Phase I, 4.5 Hazardous Material Survey Potential Phase II,4.6 Initial Feasibility: Routine Wetlands and Habitat Assessment,(Review of Corps documentation for the OHWM and the USFWS NWI Maps within the project reach) Biological Survey and Habitat Assessment, Deliverables: Property Report and Initial Feasibility Study</p>	<p>Month 4 to Month 8</p>
<p>Task 5: Acquire Property 5.1 Structure Ownership,5.2 Fund and Close Deliverable: Trust Deed or Easement</p>	<p>Month 8 to Month 10</p>
<p>Task 6: Feasibility Study of the Project Site: 6.1 Review of Historic and Existing Conditions: Wetland Habitat Types, Fluvial Geomorphological Assessment, Sources of Hydrology, Threatened and Endangered Species 6.2 Hydrology: Climate and Surface Water of the Area, Water Balance, River Flow/Hydraulic Analysis, Soils and Geology 6.3 Review of Existing Water Quality Data to assess potential treatment levels from Constructed and Restored Wetlands, 6.4 Mitigation Banking within River Park, 6.5 Project Evaluation Criteria: Ecological Criteria, Policy Criteria, Feasibility Criteria, Technical and Biological Practicability, Future Management, 6.6 Conceptual Design: Habitat Mitigation and Monitoring Plan, Conclusions and Recommendations for the Basis of Design to include Plans and Specifications for Construction Bid Documents. Deliverables: Feasibility Study</p>	<p>Month 10 to Month 18</p>
<p>Task 7: Acquisition of Permits Deliverables: All Necessary Permits</p>	<p>Month 10 to Month 18</p>

<p>Task 8: Final Design including Grading Plans and Specification 8.1 Review of Restoration Goals and Objectives, 8.2 Restoration and Engineering Design: Final restoration design and construction strategy, 8.3 Plans and Specifications 8.4 Construction Implementation and Bid Documents – Multi-Year Schedule: Construction Supervision, Construction and cost contingencies, Construction Contract, Maintenance/establishment, Operation and Maintenance Manual, Compliance Monitoring Multi-year schedule Deliverables: Engineering Design Documents, Bid Documents</p>	<p>Month 18 to Month 22</p>
<p>Task 9: Construction Implementation Phase 9.1 Grading and Excavation, 9.2 Removal of Non Natives, 9.3 Revegetation with Targeted Plant Species, 9.4 Biotechnical and erosion control, 9.5 Final site inspection, review and acceptance of to design specifications Deliverables: Completed Wetland Construction</p>	<p>Month 22 to Month 30 Construction to take place during the summer months during low flow season</p>
<p>Task 10: Community Outreach/Involvement 10.1 The Ranger Project:Teacher In-Service, Purchase Equipment Implement Curriculum, River Science Awards and the Greater San Diego Science Fair. 10.2 Project Completion Event Package: Press, Public Invitation, Signage, 10.3 Mailing to community members Deliverables: Ranger Curriculum, Outreach Package, Mailer and Mailing List</p>	<p>Beginning in first August of the contract period, and then on going</p>
<p>Task 11: Success Criteria Monitoring and Implementation Multi-year Schedule 11.1 Nutrient and Chemical, 11.2 Photo Monitoring, 11.3 Threatened and Endangered Species Monitoring, 11.4 Contingency Measures Subsequent years monitoring will be paid for by other sources Deliverables: Water Quality Report, Photo Monitoring Report, Threatened and Endangered Species Report</p>	<p>Month 30 and on going</p>
<p>Task 12: Draft and Final Report 12.1 Draft Report Feasibility, Engineering report and plans and specifications,12.2 Final Report including as built drawings, and construction documentation including photographic document</p>	<p>Month 36</p>

PART CI- BUDGET SUMMARY SHEET - TASK BREAKDOWN*

		<u>TOTAL COST</u>	<u>PROP 13 FUNDS</u>	<u>MATCHING FUNDS</u>
Task 1	Administration	\$236,840	\$189,472	\$47,368
Task 2	CEQA/NEPA			
	Permit Review	\$12,600	\$10,080	\$2,520
Task 3	QAPP	\$5,500	\$4,400	\$1,100
Task 4	Due Diligence	\$32,250	\$25,800	\$6,450
Task 5	Property Acquisition	\$1,176,120	\$940,896	\$235,224
Task 6	Feasibility Study	\$58,425	\$46,740	\$11,685
Task 7	Permit Acquisition	\$65,000	\$52,000	\$13,000
Task 8	Final Design	\$126,225	\$100,980	\$25,245
Task 9	Construction	\$604,586	\$483,669	\$120,917
Task 10	Community Outreach	\$27,800	\$22,240	\$5,560
Task 11	Success Criteria	\$39,320	\$31,456	\$7,864
Task 11	Reports	\$10,820	\$8,656	\$2,164
	Total Project Cost	\$2,395,486	\$1,916,389	\$479,097

PART C2 - BUDGET SUMMARY SHEET - LINE ITEM Budget

	Task Cost	Line Item	Prop 13	Match
Project Manager	\$41,060	\$38,186	\$30,549	\$7,637
Project Coordinator	\$133,000	\$123,690	\$98,952	\$24,738
Project Administration	\$83,600	\$77,748	\$62,198	\$15,550
Total Personnel	\$257,660	\$239,624	\$191,699	\$47,925
Operating Expense		\$119,774	\$95,819	\$23,955
Land Costs	\$1,176,120	\$1,093,792	\$875,033	\$218,758
Equipment	\$12,500	\$11,625	\$9,300	\$2,325
Consultant	\$187,275	\$174,166	\$139,333	\$34,833
Laboratory	\$21,120	\$19,642	\$15,713	\$3,928
Construction	\$740,811	\$688,954	\$551,163	\$137,791
General Overhead		\$47,910	\$38,328	\$9,582
Total Budget	\$2,395,486	\$2,395,486	\$1,916,389	\$479,097

* A detailed budget is found in the appendix

9. Describe the source and nature of the matching funds.

Matching funds for this project will come from San Diego County. On June 25, 2001 the State Coastal Conservancy allocated \$800,000 dollars to the County to be spent on habitat restoration projects within the project boundaries of the San Diego River Park – Lakeside plan area. \$400,000 has been reserved in this account as match for the proposed project.

PART D – QUESTIONNAIRE (Not to exceed 13 pages)

1. Identify, if applicable, the major sources of NPS pollution that will be addressed by this project.

The Lakeside segment of the San Diego River contains major sources of NPS pollution. **Urban runoff, stormwater runoff, and hydromodification** are the major sources of this pollution.

As an urbanizing community, construction is always in evidence somewhere with in this reach of the river. Additionally, landscape watering, with high levels of pollutants has become a major problem. Small drainages now flow all year long with urban runoff from lawn watering, car washing etc. These drainages flow even during the hottest summer months.

A major freeway, State Route 67, defines the southern edge of the river area (see map) **Stormwater Runoff** and the first flush has historically been highly polluted during winter rains. The proposed site accepts much of the runoff from this freeway as well as from local surface flows. This water combined with stormwater flooding from a small drainage that discharges into the project area increase the pollution loads in the San Diego River in the winter months.

This area of Lakeside, defined by the redevelopment area, has been sand mined (**Resource Extraction**) for nearly 100 years. Its influence on the hydraulogy and water quality has been strongly felt in all functions of the river. Sand mining has increased the levels of TSS and TDS throughout this section of the river. Sand mining occurs directly north of the project site and in reaches above and below the project site.

Hydromodification (channelization of the river) has exposed the Santee/El Monte aquifer as demonstrated by the ponding in the river channel. This has changed the aquatic species found in the river. Slightly east of the proposed project area, Los Coches Creek, an entirely hardened tributary to the river, discharges its floodwaters and urban runoff into the ponded areas of the river year round. El Capitan and San Vicente Dams have reduced the flood flows into the river but have also reduced the amount of recharge available to the Santee/El Monte aquifer. Many of these threats have been identified in the Watershed Management Approach for the San Diego Region, 8th version (WMA)

2. Is the proposed project identified in an existing watershed management plan, restoration action strategy, or equivalent document?

Yes the proposed project is consistent with and complementary to the goals of the Watershed Management Plan (WMP) for the San Diego River. Work on that plan has just begun. That work, funded by Prop 13 grant monies, will be completed in approximately three years. Relevant water quality goals are as follows:

Surface Water Quality: (1) Identify and manage sources of waste contributing to fecal coliform CWA section 303(d) listings; (2) Prioritize and develop management strategies for sources of point source and non-point source pollution to surface waters; and (3) Prevent the degradation of surface water quality during development and urbanization.

Groundwater Resources: (1) Identify and protect groundwater recharge areas, especially in the Santee-El Monte Groundwater Basin; (2) Ensure the ability of groundwater basins to meet water storage and supply needs, especially in drought years; and (3) Prevent the salinization of groundwater from high TDS imported water.

Habitat and Wetlands: (1) Maintain, restore, and enhance wetlands, riparian corridors, and other sensitive habitat; (2) Protect endangered species; (3) Protect the significantly natural and undeveloped eastern half of the SDRW; (4) Protect habitat from urban development, erosion, and water pollution; and (5) Protect and enhance the natural purification functions of wetlands.

Flood Control: (1) Ensure the development and implementation of effective flood management measures; (2) Establish a flood warning system; and (3) Ensure that continued development in the SDRW does not exacerbate existing flooding

problems; and (4) Ensure that continued development in the SDRW does not or result in modification of existing stream hydrology in a manner which causes environmental degradation such as scouring and erosion, etc.

In particular, the proposed project is identified within the specific management measures. "The plan will implement management measures to reduce contamination of surface water and groundwater in the SDRW. Priority areas of concern include 1) urban, 2) wetland, riparian, and vegetated treatment systems, and 3) hydromodification..."

"...Specific management measures to protect and restore wetland, riparian, and vegetated treatment systems, and vegetated treatment systems include; 1) protection of wetland and riparian areas, 2) restoration of wetland and riparian areas, 3) control NPS pollution through the use of vegetated treatment systems, and, 4) conducting education/outreach activities. Specific management measures to address sources on NPS pollution related to hydromodification activities include; 1) channel evaluation, 2) stream bank and shoreline erosion, 3) increases in sediment delivery downstream from dams, and 4) conducting educational programs."

The County of San Diego approved of a Multiple Species Conservation Program (MSCP) on October 22, 1997, which the comprehensive WMP can easily be integrated for the watershed. The MSCP is a comprehensive, long-term habitat conservation plan, which addresses the needs of multiple species and the preservation of natural vegetation communities in San Diego. The MSCP protects 46 sensitive plant species found in these vegetation communities, coastal sage scrub, maritime succulent scrub, chaparral, grassland, freshwater marsh, oak riparian forest, oak woodland, riparian scrub, riparian forest, riparian woodland, and tecate cypress woodland. The MSCP protects 27 birds, 4 invertebrates, 2 amphibians, 3 reptiles and 3 mammals. Large interconnected blocks of habitat provides for preservation of a wide range of species, adequate foraging grounds and diversity within species populations.

Although the USDRID area was excluded from the MSCP due to the extensive revegetation and habitat requirements in the *RiverWay Specific Plan*, the project site and the redevelopment area are included within the scope of the biological implementing ordinance of San Diego County. This ordinance will implement the Multiple Species Conservation Plan; part of the Natural Communities Conservation Program to protect threatened and endangered species particularly the least Bell's vireo. Land management will be consistent with the MSCP directive and consistent with the recovery plans for the least Bells vireo.

In addition, the proposed project meets many of the goals outlined for target projects within the San Diego region as a whole as outlined in Table *NPS-4A SCRWQCB TARGETED PROJECTS FOR PROTECTION AND NONPOINT SOURCE CONTROL GRANTS (319(h) and PROPOSITION 13)*. (WMA) Project descriptions delineated here include: Implement watershed education, awareness and training activities, implement volunteer citizen monitoring, implement measures to reduce pollutants (including trash) in urban runoff, to minimize impacts to aquatic and riparian habitats from flood control measures, to reduce nutrient loading, to restore WARM, COLD, SAL, MAR, WILD and RARE beneficial uses, to control invasive non-native riparian plant species, to restore wetlands.

This project supports and enhances wetlands functions as outlined the Southern California Wetlands Recovery Project Regional Strategy (2001), a program of the California State Coastal Conservancy, which is providing match for this project. The proposed project will enhance fish and wildlife habitat, provide food chain support, provide flood water storage, stream bank anchoring, sediment trapping, water quality and nutrient processing, as well as enhancing ground water recharge.

3. What other restoration or protection actions or projects have been taken previously to implement the document?

The WMA only list two completed projects for the San Diego River in Table 7A, *San Diego Region Action Plans and Strategies for Protection, Restoration, Recovery, Enhancement, and Management of Watersheds, Wetlands, Lagoons, and other Water*. The projects mentions two projects within the San Diego River Watershed, one at Lindo Lake in Lakeside, funded by the 205j program and completed in 1998 by the County of San Diego Department of Parks and Recreation. The goal of that project was to evaluate lake rehabilitation alternatives and develop a restoration plan to improve water for beneficial uses. The Famosa Slough Enhancement Plan completed in 1994 by the City of San Diego and the Friends of Famosa Slough is also mentioned in this table.

Other projects undertaken in the watershed to support and enhance water quality include:

- ◆ The City of SD and the County of SD both adopted MSCP to preserve several acres of high quality wildlife habitat.
- ◆ Groundwater Management Planning Study, El Monte/Basin, sponsored by SDSU and SDCWA..
- ◆ The San Diego River Mission Creek Development Reclamation Plan revegetated the river in Santee with native habitat that has allowed endangered species to return to the area.
- ◆ The City of San Diego Water Department and the Helix Water District completed a Watershed Sanitary Survey in 1996 that identified existing and potential sources of contamination.
- ◆ Conceptual Area Acquisition Plan (CAAP) was adopted for the Iron Mountain Ridge and Canada de San Vicente Preserves by California Fish and Game, County of SD and Iron Mountain Conservancy.
- ◆ The Upper San Diego River Plan for the Lakeside involves a variety of land uses and modification to the river channel to create a more confined but naturalized condition, which has been in process over 20 years.
- ◆ Mission Valley Preserve, Mission Trails Regional Park, Santee Lakes, Famosa Slough, and Mast Park in Santee, for preservation
- ◆ Drop structures were installed along the River to reduce flow velocity and storm drain stenciling is conducted regularly throughout SDRW
- ◆ General Plan 2020 may add support to modify land use designations
- ◆ San Diego County Water Authority is conducting a study of utilizing the groundwater basin for storage purposes
- ◆ RCP Sand Mining Reclamation Plan creates new riparian woodland, freshwater marsh habitat and revegetating islands, but relies on WMP
- ◆ Riverview Water District MTBE clean up
- ◆ Lakeside Community Planning Group, California Department of Fish and Game, Lakeside Water District, local businesses and a resident coalition are working to protect the River and the Santee-El Monte Groundwater Basin.

4. Is this the next-phase of an ongoing project?

Yes, this project is part of several other projects of various scope and reach along the San Diego River. This project is a demonstration project for a larger effort along the San Diego River in Lakeside and along the urbanized section of the San Diego River as a whole. The proposed project is part of a 100 acre project which has been sand mined, experienced catastrophic flooding and been raised out of the floodway with imported fill. The goals of the San Diego River – Lakeside Conservancy, a partner in this effort, is to purchase and or acquire this land, removed the fill and restore the habitat, widen the channel to slow flood flows, create a wetlands boundary along the banks of the ponded areas to improve the recharge of groundwater both in terms of quantity and quality through the use of palustrine and riverine systems.

5. Describe how the project will result in ongoing or widespread implementation throughout the project area or region or state.

The San Diego River is the focus of intense interest. Plans have been announced to turn the entire river into a river park, from its headwaters near Julian to its mouth at Pacific at Dog Beach in Ocean Beach. The overarching goal is to return the San Diego River to the people of San Diego by providing a trail that will connect the river from Lakeside to the beach, and by restoring habitat and river functions along the entire length of the river. This project will be the first off channel constructed palustrine wetland along the San Diego River for the purpose of water quality, habitat restoration, and slowing flood flows and recharge.

Municipalities, agencies and citizens groups will closely monitor the success of this project for both habitat restoration and improved water quality. They will be looking at the success of this project as they plan their own restoration efforts along the San Diego River. If it is deemed successful, it will become of model of palustrine and riverine restoration for the watershed.

6. Describe related anticipated future work in the affected watershed.

The San Diego River Park Foundation recently contracted with Studio 606, of the Graduate Landscape Architecture Program of California State Polytechnic University to develop a concept plan for the creation of the San Diego River Park. The draft concept plan identifies phyto-remediation as a cost-effective way of increasing water quality and habitat values

along the river. They have proposed the creation of a constructive wetland downstream from the project site. The final document will identify places along the urban section of the river that would lend themselves to the creation of constructed and/or restored wetlands to improve water quality enhance habitat values. Additionally, this document is intended to guide the creation of a master plan for the San Diego River Park. It will explore all aspects of a river park including, historical, archeological, habitat and ecological systems, fluvial geomorphology, flood and general hydrology and hydraulics, trails, and interpretation.

Currently, San Diego County and Scripps Institute of Oceanography are advancing a project to instrument three watersheds in San Diego County, the Santa Margarita River, the San Diego River and the Tijuana River. The goal of the project is: 1) real-time precipitation, flow and water quality monitoring network based on wireless internet technology supporting the identification of source and impacts, 2) data acquisition, dissemination, and modeling system to provide this information to the organizations and individuals with the responsibility for managing and responding to water quality impairments and risks by 'now-casting' stormwater outputs. These functions provide immediate, short-term benefits to water quality managers and support a longer-term strategy of integrated watershed management in determining where stormwater is coming from and where it is going as well as when and how much. These same technology resources can be used to augment flood warning and management systems.

Additionally

1. The City of Santee has applied for an Urban Streams Restoration Grant for the Sycamore Creek, a tributary of the San Diego River.
2. The San Diego River Park – Lakeside Conservancy has applied for a restoration and widening plan as well as a Green Mapping Project from the Urban Streams funds as well.
3. The City of San Diego received a \$1.5 million grant from Clean Beaches Initiative that project will address bacteria at Ocean Beach. As part of the fine levied for the Adobe Falls sewer spill in 2001, the City of San Diego is working on the Adobe Falls supplemental environmental project. That project will remove non-natives and restore approximately 4 acres at the Adobe Falls Open Space. The City has also allocated \$430K to the San Diego River Restoration Master Plan. A portion of this money was combined community group money and used to fly aerials over the San Diego River to map invasive plants. It will include two demonstration projects. One will demonstrate exotic removal and the other will incorporate removal and revegetation to assess the efficacy of the two approaches.
4. The City of San Diego is the lead on Watershed Urban Run off Management Plan as part of the Regional Municipal Storm Water permit. This is a joint project between the public, NGOs, and other jurisdictions within the San Diego River Watershed. That plan is focused on water quality assessment.

7. Will the proposed project achieve measurable water quality improvements?

The proposed 303(d) listing for the San Diego River identifies several pollutant/stressors to the San Diego River. They are dissolved oxygen (DO), fecal coliform, phosphorous, and total dissolved solids (TDS). Water quality sampling by the River View Water District of their municipal wells located on site also showed increased nitrogen, MTBE contamination and TDS. The proposed project's constructed wetlands will be designed to treat and improve water quality in the following areas: fecal coliform, phosphorous and total suspended solids (TSS) and nitrogen and phosphorous and potentially DO. (Westerhoff, page 85-86)

The existing Riverview Water District QAPP will provide the basis for the water quality-monitoring program. The monitoring program will include baseline analysis of water quality prior to implementation of the project to assist in determining the improvement in water quality as a result of treatment in the wetlands. Surface and groundwater control points will be established outside the wetlands to look for trends and changes over time in the water quality as it enters the area influence by the wetlands.

In order to measure water quality improvement, surface and groundwater samples (as appropriate) will be collected on a quarterly and submitted to an EPA certified laboratory for analysis per the Riverview Water District QAPP. The data will be put into an excel spreadsheet and graphed. A Water Quality Report will be submitted annually.

Surface Water Collection:

The Riverview Water District will take grab samples and have them analyzed for the constituents of concern in this project. Attempts will also be made to estimate the flow in order to calculate a loading rate with the laboratory analysis.

Groundwater Collection:

The Riverview Water District will install 6 foot long, 2" PVC slotted pipes, that have a clean sand screen with a locking cap that will act as piezometers and we'll take a sample from the groundwater piezometers. Piezometers will be installed according to United States Geological Survey (USGS) standards. A hand bailer will be utilized to take the sample. The Riverview Water District may have to bail the well the day before they sample. USGS protocol requires that 3 to 5 times the well volume is pumped before the sample is collected. Many times a shallow 'well' can be bailed dry and staff will need to come back the next day to get a 'clean' representative sample because the well may not recover quickly.

Samples will be taken upgradient of the site, within the site and down gradient of the site. This way the project will be able to quantify its efficacy.

This data combined with the regular monitoring data will be analyzed for decreases in pollutants; particularly nitrogen as nitrogen is elevated in the Riverview Water District wells. Other test, focusing on phosphorous, fecal coliform and DO will be used to assess the improvement of water that may be returned to the San Diego River.

Please describe the anticipated improvements to water quality. Describe the anticipated methodologies that will be used to measure water quality improvements. Identify factors that will be considered and what parameters will be used to determine the effects the project will have on water quality. Describe how this will be used to evaluate the effectiveness of the project in solving specific pollution or water quality /beneficial use problems.

8. Identify the NPS management measures(s) (See section 6 of the ARD) that the proposed project will implement and describe how you will be able to track or account for the implementation of these measures.

NPS Management Measures	Tracking Measures
<p>Urban Areas:</p> <ul style="list-style-type: none"> c) Protection and restoration of surface waters by minimizing pollutant loading d) Minimization of soil erosion and sedimentation problems, e) Protection of groundwater resources, f) Control and management of runoff to prevent flooding g) Management of aquatic and riparian resources for active and passive pollution control 	<p>Water quality testing</p> <p>Water quality testing, photo monitoring</p> <p>Well Logs</p> <p>Photo monitoring during flood events</p> <p>Photo monitoring, water quality testing</p>
<p>Wetland, Riparian Areas, and Vegetated Treatment Systems:</p> <ul style="list-style-type: none"> h) Protect downstream areas from the adverse impacts of channel scour, erosion and temperature and chemical fluctuations i) Habitat restoration will minimize such changes to the hydrology, substrate, geochemistry, and species composition j) Increase the amount of recharge near existing municipal wells 	<p>Photo monitoring, water quality testing</p> <p>Water quality testing, photo monitoring, threatened and endangered survey, (T&S survey)</p> <p>Well logs</p>
<ul style="list-style-type: none"> c) Hydromodification: d) Minimize impacts to riparian, wetland and aquatic habitats from flood control measures 	<p>Photo monitoring, T&S survey</p>

e) Public education and outreach	Post-testing, Science fair entries Number of people attending Number of residences contacted
f) Implementation of Ranger Project	
g) Public event	
h) Local mass mailing	

9. List the watershed groups of which the applicant is a member.

The applicant is a member of the San Diego River Watershed Working Group that is headed by the County of San Diego, Department of Environmental Health. Teresa Brownyard is project leader.

10. Describe the level of local support for your project, including local government, tribal government, organized groups, landowners, agencies, and other working in the watershed. Also identify your relationship to other watershed or ecosystems projects and programs in your area.

The Riverview Water District is a member of San Diego River Watershed Working group. The working group has numerous members participating as stakeholders. The applicant has close ties with the San Diego River Park – Lakeside Conservancy and their memberships and affiliations.

The San Diego River Park – Lakeside Conservancy (SCRP-LC) is part of a larger stakeholder driven process to create a river park and restore the river along the entire length of its course. The project enjoys the support of Assembly Select Committee on Parks and River Restoration, Dianne Jacob, county supervisor as well as San Diego Mayor Murphy and the San Diego City Council, the City of Santee as well as the San Diego River Park Foundation.

The SCRП-LC is a member of the San Diego River Coalition, a citizens advisory committee, the working group to the San Diego River Park Foundation whose membership includes: Friends of Dog Beach, Friends of Famosa Slough, Audubon Society, Friends of Mission Valley Preserve, Sierra Club, Mission Trails Regional Park CAC, Tecolote Canyon CAC, Friends of Adobe Falls, San Diego County Bicycle Coalition, Back Country Land Trust, Endangered Habitats League, Navajo Community Planners, Tierrasanta Community Council, San Diego County Trails Council, Mission Trails Regional Park Foundation, Mission Valley Unified Planning Committee, Dog Beach Committee/Ocean Beach Town Council, Aquatic Adventures - Science Education Foundation, Project Pacific, California History and Culture Conservancy, Back Country Coalition, Cuyamaca Rancho Foundation, California Native Plant Society, San Diego Archeological Center, Mission Valley Community Council, Ramona Trails Council, Urban Corps of San Diego, Founders' Trail Associates, Friends of Ruffin Canyon, San Diego Baykeeper, San Diego Stream Team, and Serra Mesa Planning.

The Lakeside School District, Grossmont Union High School District, the Juvenile Court School system are working on this project as part of the public education and outreach effort.

Over 3000 Lakeside resident signed a petition asking for the creation of a river park and the restoration of riparian habitat San Diego County is taking the lead on a watershed management plan for the San Diego River watershed.

11. Indicate if this project is implementing a proposed or existing TMDL (see Section 19 of the ARD)

No. However, the most recent proposed additions to the 303(d) listing included dissolved oxygen, fecal coliform, phosphorous, and total dissolved solids. The watch list for the San Diego River include: benthic community degradation, benzene, chlordane, eutrophication, exotic vegetation,(water hyacinth, arundo sp., tamarisk,sp) methly tertiary-butyl ether (MTBE) and trash. TMDL have not yet been developed for the San Diego River Watershed.

12. Summarize the actions that have been accomplished to date to address the problems(s) (e.g., past monitoring, planning, implementation phases).

This project marks the first major step at addressing water quality issues in Lakeside. Limited water quality testing has been undertaken to support 303(d) process. The Riverview Water District will begin construction of their MTBE treatment

plant soon. The development of the San Diego River Watershed Plan is funded with Prop 13 grant monies and that effort is being 'kicked off' June 28th.

13. Describe related activities that have been completed to provide the reviewers with additional background information to understand and review the proposed project. These activities may include monitoring, watershed planning, water quality assessment, and technology testing and implementation projects.

This project is part of a much larger river park effort, both in Lakeside and along the San Diego River as a whole. The goal in Lakeside is to acquire significant portions of the undeveloped land along the river in the redevelopment district as possible. The southern side, where the proposed project is located is intended to support the natural functions of the river primarily: slowing flood flows, increasing recharge increasing both riverine and palustrine habitat. The northern side is intended to be more people centered. The Conservancy has received a donation of 25 acres on the corner of Channel Road and Lakeside Avenue.

The plan is to construct a Nature and Cultural Center on the site. That center will be organized around the San Diego River, its natural and cultural history. The San Diego River, "California's First River" has never had an organized interpretive treatment. The Center will explore the river's cultural, economic and social significance to all of the peoples who have inhabited its shores, from paleolithic cultures, to existing Native American groups, to the Europeans. Soccer fields are planned for the site at the base of Palm Row. The County is in the process of constructing a trail to link the north side of the river in Lakeside with Santee and begin the process of connecting the San Diego River Park, from the mountains to the sea. The proposed project, in its role as a demonstration project, will facilitate the creation of wetlands within the Lakeside River Park and along the entire length of the river.

Beneath the San Diego River lie the Santee-El Monte and Mission San Diego Groundwater Basins that have the storage capacity of between 70,000 to 100,000 acre-feet. The Santee-El Monte Groundwater Basin provides a cost-effective and reliable water supply to four water districts (Padre Dam Municipal Water District, and Helix, Lakeside and Riverview Water District) and the City of San Diego. Due to conjunctive use, Lakeside residents have the lowest water rates in San Diego County. However, groundwater levels are declining and water supply and quality is declining in this aquifer. Between 1960 and 1990, groundwater levels declined by approximately twenty feet and total dissolved solids (TDS) levels doubled in certain regions in Lakeside (especially near sand mining sites). Near urbanized regions in Santee, TDS levels have tripled making well water unpotable (Groundwater Management Planning Study, Draft Report 1999). In 1999, the Riverview Water District was forced to shut down four wells due to MTBE contamination. Unfortunately, this supports the contention that current land use planning practices and best management practices are not adequately protecting groundwater quality. In addition, the destruction of native riparian habitat, the presence of large stands of arundo donax (an exotic plant which consumes great amount of surface and groundwater), and sand mining operations have also contributed to declining groundwater levels and water quality degradation. In the rapidly urbanizing SDRW, where potable water demand is expected to increase greatly in the coming years, it is essential that a comprehensive planning effort be initiated to examine the potential of using groundwater basins to store water and meet drought year needs. Conjunctive use in Lakeside is one strategy that may minimize dry year water diversions from the Sacramento-San Joaquin Rivers Delta.

Additionally, the proposed project site is a receiving location for floodwaters from a small drainage in Lakeside. There is an opportunity in this drainage to use some very innovative flood management techniques. The stream course is still partially natural, and could be a location of a stream restoration project. The County owns some property very near the discharge point of this stream flow near the freeway. This property could be converted to a retention basin/treatment wetland on the south side of SR 67. The idea would be to line this basin with an impervious barrier and to capture the first flush in this retention basin/treatment basin and then move it forward to the proposed project to be treated again.

14. Have any previous Proposition 13 implementation grants or grants from other agencies and other funding sources (such as CALFED, CWA Section 319[h] or 205[j], Proposition 204) been awarded for work in this watershed? List each project by title, the source of funds, and the year you received the grant(s).

The Lakeside segment has not received any grants from Prop 13, however, several grants have been received by other organizations within the watershed. They are outlined below.

\$5 million was allocated to the City of Santee for Flood Protection for Forrester Creek. (Chapter 5, Flood Protection Program, Article 2.5, Flood Protection Corridor Program as administered by the Department of Water Resources. Other grants and awards include: 1) A Section 319(h) application was submitted to implement wetland habitat restoration to restore natural water purification functions in Forrester Creek through removal of concrete and other hardscaping and re-establishment of native wetland vegetation. 2) Proposition 12 funding: Acquisition of the Boys and Girls Club Property of Lakeside. 3) The Environmental Trust (TET), La Mesa: San Vicente Ridge Conservation Bank, 4) San Diego County: Acquisitions of the Lakeside Archipelago under MSCP. 5) Iron Mountain Conservancy-Caltrans Environmental Enhancement and Mitigation (EEMP) Grant: acquisitions in the San Vicente Creek Watershed. 6) San Diego County: Resolution to fund acquisition in the San Vicente Creek Watershed. 7) California Fish and Game: Adoption of acquisition plan for the San Vicente Creek Watershed. 8) Environmental Trust restoration project Carlton Hills site, 9) San Diego River Park – Lakeside Conservancy applications to Prop 12 Riparian and Riverine Grant Program (Prop 12) and to the EEMP.

15. Describe the financial/institutional capability or commitments that the applicant has to ensure the project will be completed.

The Riverview Water District sees great community and economic benefits to this project and is entirely committed to seeing this project through to completion. If successful, this project will benefit the ratepayers of this water district and will provide evidence to other water districts of the social and economic benefits of protecting the San Diego River and its Santee/El Monte aquifer as a viable source of water in a period where new municipal water sources are growing scarce. The matching funds partner is the County of San Diego. The County recently received a grant from the State Coastal Conservancy. That grant fund was designated specifically for the Lakeside portion of the San Diego River for habitat restoration. The Coastal Conservancy has a great and abiding interest in restoring wetlands in and near the coast and has committed funds to this project as part of a long range program to create and enhance more wetlands.

If other funding sources are necessary to make the project fully functional, the applicant must identify these funding sources and be able to demonstrate a strong likelihood that these funds will be available within one year from the contract execution for commitment of the funding from this program.

16. Is the project ready to proceed? Include site access agreements, dates, and explanation if access has not yet been secured, status of match share; CEQA/NEPA, and other permit status and any barriers or conditions, Timely funding/logistical delays with subcontractors; and any other constraints.

The project is ready to proceed based on the scope of work and the tasking. The Programmatic EIR gives the project a good start at the CEQA process. A scoping meeting was recently held to discuss the issues and permits that will be needed for the larger project, that of removing fill and restoring the wetlands on the lands connected to the proposed project. The agencies in attendance were: the National Park Service, County of San Diego, (Planning, and Flood Control) California Department of Fish and Game, US Fish and Wildlife Service, Army Corps of Engineers, Regional Water Quality Control Board, Padre Dam Water District, Lakeside Water District, and Riverview Water District. There was no objection to the project at all. All of the participating agencies saw the benefits of the project and were enthusiastic with regard to their assistance with the regulatory and permitting process. We anticipate that enthusiasm to translate to this smaller demonstration project, which is part of that larger effort.

17. Describe how the project will demonstrate a capability of sustaining water quality benefits for a period of 20 years as required by Prop 13.

With proper maintenance, well constructed wetlands has the capability of sustaining water quality for well more than the 20 years required by Prop 13. Barring a shift in the river channel or a catastrophic increase in sedimentation or by contaminant spill, this wetland should be thriving for hundreds of years.

18. If there is an NPDES permit required for this project area, describe the relationship of the project to the permit.

Yes, a construction NPDES permit is required, as the site is more than 1 acres. The project will also be subject to the County NPDES permit, as the site will receive water from the County's MS4 system.

19. Indicate if the project will utilize the services of the California Conservation Corp, community conservation corps, or other local nonprofit entities employing under-privileged youths.

The San Diego Urban Corp has expressed an interest in working on the project. We anticipate using their services for the non-native removal and the revegetation phase.

20. Will land, right of ways, easements be purchased with Prop 13 funds. Who will hold title?

Issues of land tenure have not been finalized. The proposed project site is part of a larger 25-acre parcel that is being sought by the San Diego River Park – Lakeside Conservancy as part of the large 100-acre acquisition. The Conservancy is working with the Conservation Fund to place the property in option, while the detail financial arrangements are being made. Barring the timely completion of that transaction, efforts will be made to acquire the property through a lot split or through a conservation easement. The San Diego River Park – Lakeside Conservancy will hold either fee title or the conservation easement. San Diego County Department of Parks and Recreation or Department of Fish and Game is available to hold title or the easement should the grant require it.

21. Have adjacent landowners been notified of the project and the request for funding under this program as required under Proposition 13.

Yes, the adjacent landowner, Lakeside Land, Co. was notified.

PART F – Environmental Information Form

NEPA/CEQA

1. Will this project require compliance with CEQA, NEPA or both?

This project will require compliance with CEQA but not NEPA as no federal funds are involved.

2. If you checked “no” to question 1, please explain why compliance is not required for the actions in this proposal.

3. If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies).

CEQA Lead: **County of San Diego**

NEPA Lead:

4. Please check which type of document will be prepared.

CEQA

Categorical Exemption

Initial Study

Environmental Impact Report

A programmatic EIR was certified for the Redevelopment area in August 2000. That document does not anticipate the change in land use from industrial to open space. An addendum with a focus on hydrology, flood and habitat is anticipated.

If you anticipate relying on either both the Categorical Exemption or Categorical Exclusion for this project, please specifically identify the exemption and or exclusion that covers this project.

5. If the CEQA/NEPA process is not complete, please describe the estimated timelines and cost for the process and the expected date of completion.

Initial Study – 30 Days

Addendum – 60 Days

For 90 days total. It is anticipated these studies will cost \$7,000.

6. If the CEQA/NEPA documented has completed:

What is the name of the document?

The EIR is called, the Upper San Diego River Improvement Project Final Programmatic Environmental Impact Report. August 2000

Please attach a copy of the CEQA/NEPA document cover page to the application.

7. Environmental Permitting and Approvals

Note: NONE of the following required permits have been obtained

LOCAL PERMITS AND APPROVALS:

Major Use Permit

Subdivision Map Act – Possible, if ultimately a lot split is required for land tenure

Grading Permit – Yes

Other – Amend the *RiverWay Specific Plan*

STATE PERMITS AND APPROVALS:

CESA compliance: 2081

CESA compliance: NCCP No, this project is incorporated into the NCCP through designation the biological mitigation ordinance rather than being specifically called out in the MSCP.

1601/03

Reclamation Board Approval

FEDERAL PERMITS AND APPROVALS

ESA compliance Section 7 consultation

ESA compliance Section 10 permit

CWA 404

PERMISSION TO ACCESS THE PROPERTY:

Depending on how the land tenure issues are resolved, permission to access private land may be required.

PART G – LAND USE QUESTIONNAIRE

1. Do the actions in the proposal involve construction or physical changes in the land use? Yes

If you answer “yes” to #1, describe what actions will occur on the land involved in the proposal. If you answer “no” to #1, describe what actions are involved in the proposal (i.e., research only, planning only)

The proposed project will remove soil and sand to the depth of approximately three and a half feet from approximately 4 acres to create an off channel wetland bowl on the proposed site. Some of the material removed will be used to create a sound attenuation berm along the upper southern rim of the project area near the Riverview Water District wells. The berms is to reduce the noise level from the nearby Hwy 67 to facilitate nesting of the least Bell’s vireo

2. How many acres of land will be subjected to a land use change under the proposal?

Approximately 5 acres

3. What is the current land use of the area subject to a land use change under the proposal? What is the current zoning and general plan designation(s) for the property? Does the current land use involve agricultural production?

- a. Current land use – sand mining
- b. Current zoning – M52
- c. Current general plan designation - Industrial
- d. Does the current use involve agricultural production? No

4. Is the land subject to a land use change in the proposal currently under a Williamson Act contract? NO

5. What is the proposed land use of the area subject to a land use change under the proposal?

The proposed land use is to convert industrial property to open space.

6. Will the applicant acquire any land under the proposal, either in fee (purchase) or through a conservation easement? YES

If you answered “yes” to 6, describe the number of acres that will be acquired and whether the acquisition will be of fee title or a conservation easement:

- a) **The total number of acres to be acquired under the proposal:** Approximately 5 acres
- b) **Number of acres to be acquired in fee:** The goal for land tenure is fee simple ownership, we will consider a conservation easement if the required by the owner. It would be expected that all of the property would be in fee simple or conservation easement. There would be no split in the actual project itself. That should not be confused with the remaining 95 acres in the over all restoration plan. This 5 acres may be split from that acreage.
- c) **Number of acres to be subject to conservation easement:** See answer to c

7. For all lands subject to a land use change under the proposal, describe what entity or organization will manage the property and provide operations and maintenance services.

Maintenance services will be described in the Maintenance Manual, which will be developed as part of this project. The proposed project will be managed and maintained by the San Diego River Park – Lakeside Conservancy.

8. Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal? YES

9. For land acquisitions (fee title or easement), will existing water rights be acquired? NO

10. Does the applicant propose any modifications to the water right or change in the delivery of the water? NO

PART H – Supporting Relevant Documents (Not to exceed 10 pages)

Appendix

Visual Tour of the Site

Memo regarding Recharge Calculations

Bibliography

Information on Huffman and Carpenter, Inc, Wetland Regulatory and Hydrologic Consultants

Ranger Program

Detailed Tasking Budget

Pictures of the 1978 and 1980 floods

MISSION TRAILS RANGER PROGRAM

Students enroll in a block or extended class period. There are several advantages to such a class. It allows for enough time for students to participate in a project, which incorporates curriculum goals, community awareness, and job shadowing. Students go to Mission Trails under the direction of Ranger Sue Pelley, Luanne Barrett and Dave Gibson from the Alvarado Treatment Center. There are four ongoing projects and teams:

1. Water quality testing
2. Habitat Restoration
3. Tracking of wildlife using the river
4. Stream Team

Ranger Project:

A relationship between Mission Trails Regional Park and West Hills High School was established in 1998. Students go once a week as members of a specific team for a hands on experience in biology.

Team 1: Water quality testing

Water quality testing is performed. A number of chemical tests, including Ph, dissolved oxygen, nitrates, TDA and hardness are performed to better assess environmental conditions and potential sources of pollution.

Team 2: Habitat Restoration

Participation in removal of non-native plants. Education on habitat restoration to assist fragile and endangered plants and animals indigenous to riparian, riverine and chapparel habitats in their survival.

Team 3: Tracking

Tracking stations are set up to

Date: 6/2/2002

To: Robin Rierdan, San Diego River Park—Lakeside Conservancy

From: Michael Dettinger, Ph.D.

Subject: Recharge and pumpage at the proposed 5-acre wetland near Riverview Water District Wells

Although a full numerical model of the surface-water/ground-water interactions and unconfined ground-water flow in the vicinity of the proposed wetland and Riverview wells in Lakeside would be required to give truly quantitative conclusions, the gist of the recharge and pumpage relationships in that vicinity (as they relate to the proposed wetland) seems to be qualitatively apparent from some much simpler calculations.

Two key questions elicited by the proposed wetlands (at the foot of the Riverview well field) are (1) How much percolation through the bottom of the wetlands (or a proposed recharge augmentation area in the wetlands project) would be required to supply all the water that might typically be pumped from the supply wells? (2) How much recharge through the bottom of the wetlands would be required to just prevent the drawdown "cone" around the supply wells from drawing water from the existing pond? If these required percolation rates are much less than the likely capacity of the wetlands to supply, then presumably the proposed wetlands would eventually provide most of the ground water pumped from the Riverview wells. If the wetlands can provide that pumpage, then any improvements in water quality provided by the wetlands will (eventually) be realized in the ground water extracted from the Riverview wells. Thus, I have made some very simple calculations regarding the first question and somewhat more involved (but still highly idealized) calculations regarding the second question.

- (1) How much percolation through the bottom of the wetlands (or a proposed recharge augmentation area in the wetlands project) would be required to supply all the water that might typically be pumped from the supply wells?

The proposed wetland area would fill much of the 5-acre parcel between the Riverview wells and the San Diego River. Part of the plan might include division of the parcel into four sub-areas, with each sub-area converted to a different wetland condition. Notably, the area closest to the wells would be reconstructed and maintained specifically to provide recharge augmentation by water that has passed through the other (more remote) wetland sub-areas. In order for this area closest to the wells to contribute enough recharge (percolation to the water table) to supply all the water typically pumped from the Riverview wells, recharge through the bottom of that subarea would need to be at least 0.05 feet/hour. This requirement is based on rough estimates that

Recharge-contributing area = one quarter of 5 acres = 54450 square feet

Pumpage = 390 gallons/minute * 21.5 hrs/day = averaging 350 gpm = 2809 cubic feet/hr
and the simple mass balance that

Pumpage = Recharge * Area, or Recharge required = Pumpage/Area

2809 cubic feet/hr / 54450 square feet = 0.05 feet/hr.

The long-term infiltration rate for a typical silty clay loam to heavy clay with grassy surface is about 0.5 inches/hr or 0.042 feet/hr (according to, e.g., Fig. 14.14, Eagleson, 1970, Dynamic Hydrology, McGraw-Hill Press). Thus the wetland sub-area near the wells would be expected (without much special soil treatment) have the capacity to provide something on the order of 4/5 of the pumpage from the wells.

If other parts of the wetland also contribute recharge (which is to be expected), then the average recharge from the wetland complex as whole would be still smaller, and presumably could be readily provided by natural percolation through the wetland soils to the water table. For example, if 75% of the 5-acre parcel

the well dictates the size of the contributing area. In reality, until much more of the river boundary in this vicinity is converted to wetland (than just this first 5-acre parcel), recharge probably will be restricted to proposed wetlands. As a consequence, the answer to question #1 (R must be at least about 0.02 - 0.05 ft/hr to supply the well from entirely within the proposed wetlands) is probably the better approximation. As indicated earlier, this rate of percolation seems quite plausible for a wetland in this setting.

NOTE: Qualifications—I have a Masters of Science from MIT in Civil Engineering, where my thesis dealt with uncertainties in ground-water flow modeling. I've been a hydrologist for the USGS for over 20 years, of which 8 years dealt specifically with ground-water issues and as the USGS's State Ground-water Specialist for Nevada. The calculations provided here, however, are my own and do not represent any finding by the USGS.

where h is the water table elevation, h_r is the elevation of water in the river, x is distance from the river, and x_b is the distance from the river to the impermeable boundary. The flow towards the river at any point would be given by

$$q_R = -R/h (x_b - x)$$

so that, at the river ($x=0$), the flow towards the river is $R/h x_b$.

The solution for flows towards a well in the unconfined aquifer between a river and impermeable boundary (with no distributed recharge) is considerably more involved but can be approximated by image-well theory by superposition of the drawdowns, predicted by the Dupuit-Theim equation, from the actual pumping well plus a number of other imaginary wells contrived to prevent drawdowns from lowering the water surface in the river or from drawing water towards the well through the impermeable boundary.

Suffice to say that, for the same simplified geometry as assumed above, the drawdowns along the line connecting the pumping well to the river is given approximately by

$$s^2 - s_w^2 = Q/\pi K \log[(x_w + x)(2x_b - x_w + x)(2x_b + x_w - x)(4x_b - 3x_w - x)/(x_w - x)/(2x_b - x_w - x)/r_w^2]$$

where Q is the pumping rate at the well, s is the drawdown of the water table (due to pumping from the well) at distance x from the river (measured along the shortest line connecting the river to the well), s_w is drawdown within the well (which drops from the equations conveniently in the next step), x_w is the distance of the well from the river, x_b is the distance of the impermeable boundary from the river, and r_w is the radius of the well. To answer the question that I posed, we are more interested in how much water is induced to flow from the river towards the well along this same line (less leakage will always be induced to flow from the river at places farther from the well). The flow rate back towards the well from anywhere along the shortest line connecting river and well is proportional to the derivative of this equation with respect to x , which I will spare you.

Let me make one more simplification, mostly so that the equations that follow will be very simple. First, assume that the well doesn't draw any water from areas farther from the river (that is, $x_w = x_b$); in reality, the impermeable boundary is probably the bedrock of the hills on the far side of the freeway, but more than likely the well gets essentially all of its water from the river, so this simplification (which reduces the equations substantially) is not too bad. The equations could be carried through without this assumption, but they remain long and grueling (on me and the reader). With this assumption, however, the flow induced from the river towards the well, along the line connection them, is given by the mercifully simple relation: $q_w (x=0; x_w=x_b) = Q/3/\pi/x_b$

Thus, in order to answer question #2 (above), we need to know the recharge rate R that makes $q_w = -q_r$ at the river. The answer is just

$$R = Q/3/\pi/x_b^2$$

Substituting in values for Q and x_b indicates that, in order to just cut off the extraction of water from the river to the well, so that all the water pumped from the well is supplied by recharge from the intervening area, the average recharge must be at least

$$R = 0.0023 \text{ ft/hr.}$$

Conclusion:

This estimate is a much smaller recharge rate than the one derived in response to question #1, because rather than assuming that the wells derive only from within the parcel, the drawdown cone associated with

contributes recharge to supply the well, the required rate of percolation is only 0.017 ft/hr. Alternatively, if only one quarter of the 5-acre parcel was contributing recharge to the well, this could still amount to about 80% of the water pumped (eventually).

- (2) How much recharge through the bottom of the wetlands would be required to just prevent the drawdown "cone" around the supply wells from drawing water from the existing pond?

The ground-water setting at the Riverview wells and proposed wetland is not so simple that the wells will necessarily draw equally from beneath all part of the 5 acre parcel. Thus it is worthwhile making some calculations of how the drawdown cone of the wells would be likely to interact with recharge from the wetlands and, especially, recharge directly from the existing pond at the San Diego River. In order to make these calculations without the aid of a complete ground-water flow model of the area (which would be a sizeable undertaking), my approach has been to make some significant simplifications in the geometry of the interactions and then to develop a moderately complex analytical model of the flow regime. The question above taps an aspect of the resulting equations that is simple enough to describe generally, is a reasonable question given the simplifications made, and goes to the heart of how much recharge will be required from the wetlands in order to make important (water quality) contributions to the supply wells.

The approach is to apply standard Dupuit approximations (e.g., see Eagleson, 1970, Chapter 14, again) for the description of flows within an unconfined aquifer (with all the usual horizontal-flow, homogeneity and isotropy assumptions typical of analytical depictions of ground-water flows). Then the equation describing flows through a water-table aquifer with uniform recharge between a river and an impermeable boundary is readily derived. Similarly, the standard Dupuit-Thiem equation describes flows towards a pumping well in an unbounded, unconfined aquifer. The effect of the river and impermeable boundaries on the flows towards a pumping well can then be approximated by standard image-well theory. Finally, the flow regime in response to recharge between the river and impermeable boundary is combined with the image-well depiction of flow towards pumping a pumping well between the two boundaries to arrive at an approximate relation that allows us to estimate the rate of recharge that would be needed to ensure that the well's draft on the river just ceases (because the recharge over the area of the well is just sufficient to supply the well without drawing from the river itself).

The Dupuit assumption, in simplest form, describes steady-state flow in the unconfined aquifer (in one dimension here, because this is all that is required and because I don't have a grad-squared symbol in this word processor):

$$1/2 K d^2 h^2 / dx^2 = \text{recharge or discharge (depending on the situation being modeled),}$$

where K is the permeability of the aquifer.

I will assume that the wells can be approximated by a single well pumping at rates equal to the total from the three Riverview wells. I will also be assuming that the river (pond) boundary is fixed, that there is an impermeable boundary parallel to the river but on the far side of the well (from the river). All the calculations will be for long-term equilibrium (steady flow) states of the system.

If there is uniform and constant recharge, R, over the entire area between the river and impermeable boundaries, then the water-table elevations between the boundaries would be given simply by

$$h^2 - h_r^2 = R/K (x^2 - 2x_b x),$$

Letters of Support:

Supervisor Dianne Jacob, District 2, County of
San Diego

State Senator Dede Alpert, 39th District

Peter Sorenson, US Fish and Wildlife Service

Martha Coffman, Sierra Club

Randy Voepel, Mayor, City of Santee

Lakeside Water District Board Members

Padre Dam Municipal Water District

Conservation Biology Institute

Urban Corps of San Diego

Endangered Habitats League



DIANNE JACOB

SUPERVISOR, SECOND DISTRICT
SAN DIEGO COUNTY BOARD OF SUPERVISORS

February 10, 2003

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Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

Dear Mr. Hannigan:

As San Diego County's Second District Supervisor, I urge your support of the San Diego River Park--Lakeside Conservancy's application for funding through the Proposition 13 Flood Corridor Protection Program.

Grant funding will be applied toward the acquisition and restoration of over 100 acres in and adjacent to the San Diego River in Lakeside. The project proposes to enhance flood protection by expanding the river floodway and redesigning the Los Coches Creek discharge facility. By constructing and restoring wetland and aquatic habitats in the river, flood flows will be slowed and captured naturally. In addition, the restored habitats will serve as home for several threatened and endangered species, including the least Bell's vireo and the arroyo toad.

Further, the project will improve the water quality of the underlying 70,000 acre-foot Santee/ El Monte aquifer. The purification of this aquifer will directly benefit the Riverview Water District's well field, located on the property.

Finally, as co-author of the Multiple Species Conservation Plan (MSCP), I have worked hard to preserve more than 84,000 acres of sensitive habitat in San Diego County. With the help of funding from the Flood Corridor Protection Program, the acquisition and restoration of these 100 acres will serve as an important MSCP wildlife linkage. The improved flood control, water quality, and native habitats will serve as a model for educating visitors on the importance of effective stewardship of natural resources for years to come.

Sincerely,

DIANNE JACOB
Supervisor, Second District

DJ: ca

cc: Robin Rierdan, San Diego River Park-Lakeside Conservancy

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Assembly California Legislature



CHRISTINE KEHOE
ASSEMBLYMEMBER, SEVENTY-SIXTH DISTRICT
ASSISTANT SPEAKER PRO TEMPORE

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SELECT COMMITTEES:
CHAIR, PARK AND RIVER RESTORATION

EX-OFFICIO MEMBER:
STATE COASTAL CONSERVANCY

February 13, 2003

Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, CA. 94236

Dear Mr. Hannigan,

I am writing to express my support for a proposal for the Flood Control Protection Program, a program of the Costa-Machado Water Act of 2000 of Proposition 13 submitted by the San Diego River Park-Lakeside Conservancy and the Riverview Water District. This grant is for the acquisition and restoration of over 100 acres of land in and adjacent to the San Diego River that is in my Assembly District.

The San Diego River State Chartered Conservancy was recently created and this project is in the plan area. Expanding, preserving and protecting an increased river way will benefit water quality in the river and groundwater aquifer which is consistent with the goals of the Conservancy. This acquisition and restoration would be a key milestone in the creation of a river parkway and increasing the quality of the water which we all value in San Diego.

The San Diego River functions as a valuable wildlife movement corridor, linking key sub-regional Biological Core Areas of the Multiple Species Conservation Program (MSCP). The restored aquatic, wetland and transitional vegetation communities will provide habitat for several threatened and endangered species including the least Bell's vireo and will contribute significantly to the value of this key MSCP area.

The dual benefits of flood protection and wildlife conservation that this project proposes make it extremely appropriate for funding at the requested level of \$4 million. The contribution of this grant would help leverage the other sources that have been received and are also being pursued to complete this important, time-sensitive project. Your thoughtful consideration and review of this project is appreciated. I look forward to your favorable review.

Sincerely,

CHRISTINE KEHOE
Assemblymember, 76th District
Speaker Pro Tempore

Post-it® Fax Note	7671	Date	# of pages ▶
To	Robin Rierdan	From	
Co./Dept.		Co.	
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Fax #	443-4740	Fax #	

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SENATOR ALPERT@SEN.CA.GOV

California State Senate

SENATOR
DEDE ALPERT

THIRTY-NINTH SENATORIAL DISTRICT
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CHAIR, MASTER PLAN FOR
EDUCATION KINDERGARTEN
THROUGH UNIVERSITY

February 7, 2003

Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, Ca 94236

RE: Flood Corridor Protection Program

Dear Mr. Hannigan,

I am writing in strong support of the San Diego River Park – Lakeside Conservancy's grant application to the California Department of Water Resources Flood Corridor Protection Program. The area involved is within the jurisdiction of the newly established San Diego River Conservancy.

It is my understanding that the grant request of \$3.5 to \$4 million would be applied towards the acquisition and restoration of over 100 acres of mixed-zoned land to enhance flood protection, water quality, water recharge and wildlife habitat. The proposed project would expand the river floodway, establish a naturally contoured and vegetated floodplain, and allow the Los Coches Creek discharge facility to capture and slow transitory flood flows through a variety of constructed and restored aquatic and wetland habitats.

The project is a significant step in the right direction toward greatly improving flood protection and wildlife conservation. I urge your strongest consideration of the San Diego River Park – Lakeside Conservancy's request to participate in the Flood Corridor Protection Program through the Department of Water Resources.

Sincerely,

COPY

SENATOR DEDE ALPERT
39th District

DA: jo





United States Department of the Interior
Fish and Wildlife Service
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92009



In reply, refer to: FWS-SDG-3346.1

FEB 11 2003

Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, California 94236

Re: San Diego River Park-Lakeside Conservancy's Prop. 13 Grant Application

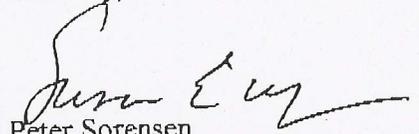
Dear Mr. Hannigan:

This letter is in support of the San Diego River Park -Lakeside Conservancy's grant application for up to \$3.5 million of Prop. 13 funds, to be used for acquisition and restoration of approximately 100 acres in and adjacent to the San Diego River. Funding of this proposal would result in improvements to flood control, water quality, aquifer recharge, and enhancement of the habitat value for wildlife. In addition to providing the above-mentioned benefits, the San Diego River is also important as a vital habitat linkage, providing a corridor for the movement of wildlife between Biological Resource Core Areas as identified by the Multiple Species Conservation Program, including the federally endangered least Bell's vireo (*Vireo pusillus bellii*; vireo) and the arroyo toad (*Bufo californicus*; toad). The enhancement of habitat for federally listed species and the improvement of the wildlife movement corridor would provide valuable connectivity between areas of high quality habitat, providing for gene flow between populations, as well as allow for movement of keystone species, which is important for the maintenance of habitat and species diversity.

The site of the proposed acquisition and restoration is the Calmat/Volcan Materials property in Lakeside, San Diego County, California. Though vireos are not known to occupy the subject property, the San Diego River still supports populations of the vireo several miles from the project site both up- and downstream. Additionally, populations of the toad are known to persist upstream near El Capitan Lake. Funding the proposed project would restore the natural vegetation and habitat for both the vireo and toad, enhancing the potential of their re-colonization of the Calmat/Volcan property and surrounding area; and thus, contributing to the recovery of these species.

We appreciate your consideration regarding this matter. If you have any questions, please contact Patricia Cole of my staff at (760) 431-9440.

Sincerely,


For Peter Sorensen
Acting Assistant Field Supervisor

cc: Robin Riordan, San Diego River Park



San Diego Chapter

Phone (619) 296-1733
Conservation (619) 296-1741
Fax (619) 296-1752
Voice (619) 296-1733

Email: sandiego@sierraclub.org

Thomas M. Hannigan, Director

California Department of Water Resources
P.O. Box 942836
Sacramento, CA 95834

Dear Mr. Hannigan,

I am writing to you to express my support for the San Diego River Park- Lakeside Conservancy's grant application in the Flood Corridor Protection Program.

For almost 80 years the San Diego River has been sand-mined and neglected until it was almost completely forgotten as a valuable natural resource in our community. Community interest has resurged over the past two years. The river, California's First River, is starting to be seen as a valuable asset in the communities along its course. The City of San Diego, the City of Santee and San Diego County are working together to establish a river long park, from the mountains to the sea. Additionally the Governor Davis recently signed AB2156, creating the San Diego River Park State Chartered Conservancy.

For much of its course in Santee and Lakeside, the San Diego River has been channelized. Sand has been mined and the banks have been raised with the impaction of fill. This has provided somewhat effective flood control but at the expense of many of the other natural river processes. This grant proposes to restore those processes while maintaining and improving existing flood control protection.

The proposed grant will remove 95 acres of channelizing fill to expand the river floodway to slow and/or capture transitory flood flows. It will create a variety of wetland types to support several threatened and endangered species as well as use natural processes to cleanse water recharging into the Santee/El Monte aquifer.

As you well know, Southern California and especially San Diego County is experiencing great uncertainty with regards to water supply issues. By restoring 95 acres, the project will allow the community to maximize the benefits and beneficial uses of the San Diego River.

Thank you for your consideration of this request.

Sincerely,

Martha Coffman
Conservation Desk - Sierra Club San Diego

3830 Ray Street, San Diego, CA 92104-3623



CITY OF SANTEE

MAYOR
Randy Voepel

CITY COUNCIL
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John W. Minto
Hal Ryan

CITY MANAGER
Keith Till

February 11, 2003

Mr. Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

Re: Letter of Support For Lakeside Conservancy of the San Diego River Park (Flood Corridor Protection Program)

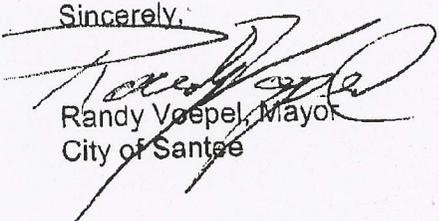
Dear Mr. Hannigan:

On behalf of the City of Santee, I wish to express my strong support for the for Flood Corridor Protection Program grant application which has been submitted by the San Diego River Park – Lakeside Conservancy. The purpose of this grant is for the acquisition and restoration of over 100 acres of strategic located land along the River in the community of Lakeside. Much of this land has been subject to heavy use through mining and other uses throughout the years. This represents a unique opportunity to create necessary flood protection, as well as provide significant habitat, water quality and aquifer improvements for this important portion of the San Diego River.

The City of Santee is adjacent to the community of Lakeside and, along with the City of San Diego and the County of San Diego; we are working cooperatively with these agencies through the San Diego River Park Conservancy to establish an ocean to mountains regional park along the River. This effort is to include flood protection, natural habitat restoration, water quality improvements, and, where appropriate, public access and recreation. This grant and the project it will support represents a critical and necessary component of this regional effort.

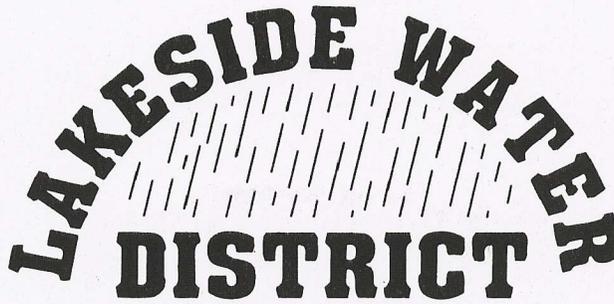
I urge your positive consideration of this grant request.

Sincerely,


Randy Voepel, Mayor
City of Santee

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ROBERT COOK
GENERAL MANAGER

FOLEY & LARDNER
ATTORNEYS

January 28, 2003

Thomas M. Hannigan, Director
California Department of Water Resources
PO Box 942836
Sacramento CA 94236

Dear Mr. Hannigan;

We are writing to you to express our support for the San Diego River Park - Lakeside Conservancy's grant application to the Flood Corridor Protection Program.

Over the course of the past 60-80 years the San Diego River in Lakeside has been sand-mined until it has reached its current state of neglect as a valuable natural resource in our community. The river has been recently recognized as a valuable asset to the community and County. The City of San Diego, the City of Santee and San Diego County are working together to establish a river park along this very river. Additionally, California Governor Davis recently signed AB2156, creating the San Diego River Park State Chartered Conservancy.

Most of the river in Lakeside has been channelized over the years. Sand has been mined and the banks have been raised with the importation of fill. This has provided some possible increase in flood control, but at the expense of many of the other natural river processes. The grant proposal would restore those natural processes while maintaining and improving existing flood control. An important aspect of the restoration will be to help recharge the valuable Santee/El Monte aquifer:

Water supply is an important and critical issue to our community. The Lakeside Water District obtains 17 percent of its water from this aquifer and we are very much interested in increasing both the volume and quality of recharge along the San Diego River within the Santee/El Monte aquifer. With the restoration of the area covered by the grant, our community will be able to maximize the benefits of a recharged and healthy aquifer and river.

communities we serve

Alpine
Blossom Valley
Cresid
Delcena
El Cajon
Flinn Springs
Harbison Canyon
Lakeside
Santee

February 7, 2003

Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

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Re: San Diego River Park – Lakeside Conservancy Application for
Flood Control/Wildlife Conservation and Enhancement Grant

Dear Mr. Hannigan,

Padre Dam Municipal Water District enthusiastically supports the San Diego River Park-
Lakeside Conservancy's grant application to the Flood Corridor Protection Program.

office

10887 Woodside Avenue
Santee, California 92071
tel 619 449 3111
fax 619 449 9469

Padre Dam believes strongly in the environmental, economic and lifestyle benefits
attainable through the restoration of the San Diego River. We are moving forward with a
\$10.7 million master plan for Santee Lakes Regional Park, support the San Diego River
Park – Lakeside Conservancy in its efforts to develop a river park in Lakeside, and look
forward to the day when Santee and Lakeside are a regional recreation destination and a
nationally recognized environmental model.

mail

Post Office Box 719003
Santee, California
92072 9003

The stretch of the San Diego River running through the community of Lakeside has been
sand-mined and neglected for almost 80 years. Over the past two years, community
interest in the restoration of this natural resource has grown. The City of San Diego, the
City of Santee and San Diego County are now working together to establish a river-long
park, from the mountains to the sea. Additionally the Governor Davis recently signed
AB2156, creating the San Diego River Park State Chartered Conservancy.

santee lakes

9040 Carlton Oaks Drive
Santee, California 92072
tel 619 596 3141
fax 619 449 4694

The years of sand mining have raised the river's banks with imported fill, providing flood
control, but at the expense of the river's natural processes. This grant proposes to restore
those processes while maintaining and improving existing flood control protection by
removing 95 acres of channelizing fill to expand the river floodway to slow and/or capture
transitory flood flows. It will create a variety of wetland types to support several
threatened and endangered species and use natural processes to cleanse water
recharging into the Santee/El Monte aquifer.

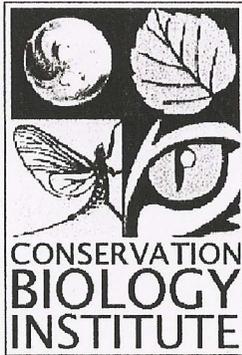
By restoring 95 acres, the project will allow the community to maximize the benefits
and beneficial uses of the San Diego River. Padre Dam is pleased to support the San
Diego River Park – Lakeside Conservancy in its efforts to address the environmental,
lifestyle and water supply goals that our organizations share.

Thank you for your consideration of their grant request.

Sincerely,

Mike Uhrhammer
Public Affairs Manager





Conservation Biology Institute San Diego Office

651 Cornish Drive
Encinitas, CA 92024
Phone: (760)634-1590
www.consbio.org

February 12, 2003

Mr. Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

RE: San Diego River Park—Lakeside Conservancy grant request

Dear Mr. Hannigan:

The Conservation Biology Institute (CBI) is a 501(c)3 nonprofit organization formed in 1997. CBI's mission is providing scientific expertise to support conservation and recovery of biological diversity in its natural state through applied research, education, planning, and community service. We are working as part of the advisory group for the San Diego River Park—Lakeside Conservancy project. We enthusiastically support their grant request for the acquisition and restoration of land along the San Diego River, which will contribute to the ecological values of the watershed and greatly enhance regional wildlife conservation efforts.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Stallcup', written in a cursive style.

Jerre Ann Stallcup
Conservation Biologist



January 17, 2003

Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, Ca 94236

Dear Mr. Hannigan,

I am writing to express our organizations' enthusiastic support for the San Diego River Park- Lakeside Conservancy grant application to the Flood Corridor Protection Program.

The San Diego River, California's first river has far too long been sand mined and channeled. The Conservancy's application to reverse this neglect and to restore the natural processes of the river will significantly assist our community in enhancing a precious natural resource. The positive results of this ambitious project will prevail in our region for generations.

The Urban Corps of San Diego, founded in 1989, is a job-training program for at-risk young adults between the ages of 18-25. The majority has not completed high school, come from broken families and reside in inner city neighborhoods. Our program is dedicated to assure that these underprovided youth do not become an invisible segment of our communities, by providing the necessary education and job skills necessary for a meaningful future.

The proposed grant will remove 95 acres of channelized fill to expand the river floodway to slow and or capture transitory flood flows. This enhancement will create a variety of wetland types to support several threatened and endangered species. The project area is part of the proposed Lakeside River Park, a vital link in establishing a river long park from the headwaters in the mountains near Julian, California, to the Pacific Ocean in the community of Ocean Beach in the City of San Diego.

Urban Corps of San Diego has a productive history in riparian restoration projects along the river and the opportunity to collaborate with the Lakeside Conservancy and their vision is not only welcomed but also embraced. The project scope will provide our at-risk young men and women with transferable job skills upon completion

Thank you for your serious consideration of this request.

Sincerely,

Handwritten signature of Sam M. Duran
Sam M. Duran
Chief Executive Officer

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"Earning, Learning & Conserving"

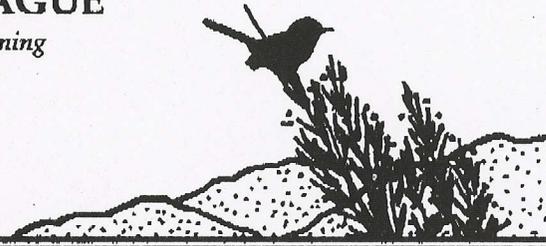
URBAN CORPS OF SAN DIEGO, P.O. BOX 12008, SAN DIEGO, CALIFORNIA 92112-3008 • (619) 235-6884 • FAX (619) 235-5425



ENDANGERED HABITATS LEAGUE

Dedicated to Ecosystem Protection and Improved Land Use Planning

Dan Silver • Coordinator
8424-A Santa Monica Blvd., #592
Los Angeles, CA 90069-4267
TEL 323-654-1456 • FAX 323-654-1931 • dsilver@exo.com



February 13, 2003

Thomas M. Hannigan, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

RE: Grant Application for the Flood Corridor Protection Program, by applicant, San Diego River Park - Lakeside Conservancy and Co applicant, Riverview Water District)

Dear Mr. Hannigan,

The Endangered Habitats League (EHL) is a regional environmental organization dedicated to ecosystem protection and sustainable land use. Accordingly, please accept the following comments in support of the issuance of the grant cited above to the San Diego River Park - Lakeside Conservancy.

The project for which the grant is requested involves the acquisition and restoration of 100+ acres of land in and adjacent to the San Diego River in Lakeside, approximately 60 acres of which is industrially zoned, outside of the river floodway, and padded out for development.

EHL views this project as an opportunity to create mutual benefit for all stakeholders by significantly enhancing flood protection, water quality and recharge processes, and wildlife habitat.

Water quality benefits are key factors of the project. The project will increase water quality and amount of recharge in the underlying Santee/El Monte aquifer (70,000-acre feet storage), and will provide direct benefit to the Riverview Water District Municipal well field located on the property.

This project provides several key flood control benefits. There will be improved flood protection for existing/ new development in the plan area. The quality and functions of natural water transport and recharge processes will be improved. The Los Coches Creek discharge facility will be redesigned to capture and slow transitory flood flows through a variety of constructed and restored aquatic and wetland habitats. The project will

establish technical state-of-the-art restoration project standards applicable to the larger San Diego River Park effort. Additionally the project will establish process standards and facilitate partnerships among and between government and non-governmental entities.

Wildlife conservation benefits are another key factor provided by this project. This is a rare opportunity to significantly increase riparian and wetland acreage and biological river functions and values in an urban area. There will also be an increase in the diversity of the species and habitat types on the project site. The project will expand the river floodway and establish a naturally contoured and vegetated floodplain. This will contribute significantly to the value of the area as an important San Diego MSCP wildlife linkage. . These aquatic, wetland, and transitional vegetation communities will provide habitat for several threatened and endangered species including least Bell's vireo. These factors will significantly contribute to regional ecology and there will also be an elimination of direct and indirect impacts that would have resulted from development of the site.

EHL sees this undertaking as a rare opportunity to capture a very extensive and varied list of benefits and beneficiaries in a single venture. The flood control and water quality factors provide benefits reaching far beyond the immediate project scope. The wildlife and conservation benefits carry to the far reaches of the county in terms of enhancing larger regional conservation goals. We offer a ringing endorsement of the project and urge your support.

If we can provide any additional information or be of further assistance, please feel free to contact us.

Sincerely,



Dan Silver
Coordinator