Name of Project Manager Larry Wasserman, Senior Chemist, MWWD
Phone (619) 758-2370

Designated Project Trustee City of San Diego Metropolitan Wastewater Department
F. David Schlesinger, Director

Description of Project Trustee capability or commitments to ensure that the project will be complete
The Metropolitan Wastewater Department is a major Department in the City of San Diego. With a staff of over 900 and an annual operating budget of more than $390 million, it has a proven track record and demonstrated ability to design, build, and operate major facilities as well as conduct environmental monitoring and research.

Statement of Project Trustee ability/authority to receive and disburse funds
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DETAILED PROJECT INFORMATION

1. PROPOSAL DESCRIPTION
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Microbial decomposition results in remineralization of nitrogen and phosphorous. Several factors contribute to excessive organic material concentrations in an aquatic system. The organic material either comes from direct input of terrestrial runoff or nutrients (nitrogen or phosphate) in amounts that support large algal blooms. This condition is called eutrophication (excess food supply).

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Please see attached proposal for details.

I certify that the information provided in this application is an accurate and complete report of the costs, scope of work and expectations of this proposed project I am submitting to the SDRWQCB.

SIGNATURE

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An Investigation of Nutrient Flux in the San Diego River Sediments and Potential Water Quality Impacts

INTRODUCTION

This project proposes to investigate the role of nutrient flux across the sediment-water interface in various different environmental segments of the San Diego River. The San Diego River, originating in Foster and Sycamore Canyons, flows through Mission Valley to the Pacific Ocean. The river is tidal and saline from the ocean to about the Pacific Highway crossing. From approximately Pacific Highway to the eastern end of the Metropolitan Transit Development Board mitigation area (just west of Fashion Valley Road) the river experiences diurnal elevation changes apparently related to hydrologic pressure from the Pacific Ocean. East of Fashion Valley Road the river is a surface water stream. Prior to development of Santee Lakes, the river was subject to intermittent summer flows.

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Sediments are a sink, or storage basin, for particles settling from the water column. Within the sediments several types of organisms utilize the organic matter. Microbial mediated decomposition results in remineralization of N and P. Invertebrate metabolism also releases N and P while consuming oxygen. The flux of remineralized nutrients from sediment to the overlying water column is dependent upon molecular diffusion, and physical mixing. In hypoxic conditions these benthic biogeochemical processes shift to an environment where heterotrophic activity is almost entirely associated with sulfate reducing microbes. Depending on site-specific conditions, the resulting nutrient fluxes across the sediment-water interface can be an important component of water quality (Miller-Way *et al,* 1994).

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METHODS

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Sediment to Overlying Water Nutrient Flux

Plexiglas chambers will be used to measure fluxes across the sediment water interface. Each chamber will be about 30 x 30-cm square and enclose a 10-cm water column. (The chamber will enclose a sufficient volume of water such that less than ten percent of the overlying water must be removed during the flux testing.) The chamber will extend 6 to 10 cm into the sediment, thus isolating the sediment column. Mounted within the chamber is a small stirring paddle to ensure mixing within the water column. Stirring is regulated to prevent sediment disturbance. Temperature, dissolved oxygen and salinity probes are also mounted in the chamber. Electrical power and data recording cables extend from the chamber to a monitoring unit at the surface. We propose to include nitrate and ammonia probes in the chamber. The specific probes will be dependent upon detection limits required for the project. Ports to permit the withdrawal of water samples and equalize water pressure during implacement are also on the top of the chambers. A recent description of the chamber system is contained in Rowe *et al*, 1994.

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Sediment cores will be collected at each experimental site. The cores will be immediately placed in dry ice to stop biological activity. Cores will be sectioned into 5-cm sections and each section will be analyzed individually to determine variation in the sediment column.

Sediment & Water Measurements and Analyses

General Observations:

1. Date, Location
2. Air Temperature (recorded hourly)
3. Wind Speed (recorded hourly)
4. Cloud cover (recorded hourly)

5. Precipitation
6. Date of most recent precipitation

Water measurements:

1. Water flow rate
2. Water depth
3. Water color
4. Chlorophyll concentration
5. Temperature
6. Conductivity/Salinity
7. Dissolved Oxygen
8. Turbidity

Flux Chamber water measurements:

1. Temperature
2. Dissolved Oxygen
3. Conductivity/Salinity
4. Ammonia
5. Nitrate
6. Phosphate
7. Sulfides

Items 1 through 5 will be measured with electronic probes. Items 2, and 4 through 7 will be analyzed in water samples collected from the flux chambers. The minimum number of samples will be two, the initial and final water concentrations. Total number of water samples will probably be between six and ten.

Sediment Core Sections: each section will be analyzed for the following items.

1. Total Organic Carbon
2. Grain Size
3. Bacteria (Fecal coliform and Fecal streptococcus)

Reporting

Each quarter a report describing the work conducted during the quarter will be prepared. The rate of nutrient flux across the sediment-water interface will be described and compared to sediment conditions (grain size, organic carbon, bacterial content and benthic invertebrate community "health"). An annual report will address variations in conditions at the four sites measured during the year. The two-year summary report will emphasize the temporal pattern of nutrient flux observed during the study, and any possible correlations between observed nutrient fluxes, sediment concentrations, and water quality assessment.

The following reports will be prepared:

1. Quarterly progress reports,
2. Annual report,
3. Summary report

4. Manuscript for publication in refereed journal.

Discussion

Organic material contains nitrogen and phosphorous compounds that are released as inorganic nutrients during decomposition. Aquatic primary productivity utilizes the released nutrients to produce organic material. This cycle continues until an imbalance creates impaired water quality. The proposed study is intended to provide an understanding of how nutrients impact the nexus between organic loading in sediments, benthic communities, and the resulting water quality. Without such an understanding, it is difficult to evaluate the impact of sudden increases in organic inputs on the environmental health of the river.

The measured parameters are components of the carbon, nitrogen, and phosphorous cycles naturally occurring in aquatic systems. The resulting data is intended to permit analysis of the how nutrients coupling between organic sediment decomposition and the overlying water column impacts dissolved oxygen water quality

To assist in understanding results of the field experiments knowledge of the typical organic discharges to the river will be very helpful. Thus, we propose an additional task involving data review of all storm water and point source discharge records for the San Diego River. In addition, a field crew will survey the riverbank from Santee Lakes to Pacific Highway to record all visual indications of discharges or potential discharges to the river.

References

Davis, W.S., B.D. Syder, J.B. Stribling and C. Stoughton. 1996. Summary of state biological assessment program for streams and wadeable rivers. EPA 230-R-96-007. US Environmental Protection Agency; Office of Policy, Planning and Evaluation: Washington, D.C.

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Resh, V.H. and J.K. Jackson. 1993. Rapid assessment approaches to biomonitoring using benthic macroinvertebrates. In: D.M. Rosenberg and V.H. Resh, eds., Chapman and Hall, New York.

Rowe, G.T., G. Boland, W. Phoel, R. Anderson and P. Biscaye. 1994. Deep-sea floor respiration as an indication of lateral input of biogenic detritus from continental margins. *Deep-Sea Research II* 41:657-668.

Tasks

Task 1: Prepare Quality Assurance Program Plan (QAPP)
Task 2: Finalize experimental site selection
Visit sites, determine access and required permissions
Task 3: Fabricate sediment flux chambers and field test

Task 4: Prepare sampling equipment, jars, preservatives for CSPB sampling
Task 5: Mobilize for six-site experimental event
Task 6: Conduct field sampling and analysis
Each experimental event is expected to require one week in the field
Task 7: Benthos identifications
Task 8: Prepare Quarterly Report

Tasks 4 through 8 will be repeated 12 times.

Task 9: Sediment testing
Task 10: Discharge Survey
Task 11: Prepare Annual report
Task 12: Prepare Final Report
Task 13: Attend meetings as needed

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1. Temperature
2. Dissolved Oxygen
3. Conductivity/Salinity
4. Ammonia
5. Nitrate
6. Phosphate
7. Sulfides

Items 1 through 5 will be measured with electronic probes. Items 2, and 4 through 7 will be analyzed in water samples collected from the flux chambers. The minimum number of samples will be two, the initial and final water concentrations. Total number of water samples will probably be between six and ten.

Sediment Core Sections: each section will be analyzed for the following items.

1. Total Organic Carbon
2. Grain Size
3. Bacteria (Fecal coliform and Fecal streptococcus)

Reporting

Each quarter a report describing the work conducted during the quarter will be prepared. The rate of nutrient flux across the sediment-water interface will be described and compared to sediment conditions (grain size, organic carbon, bacterial content and benthic invertebrate community "health"). An annual report will address variations in conditions at the four sites measured during the year. The two-year summary report will emphasize the temporal pattern of nutrient flux observed during the study, and any possible correlations between observed nutrient fluxes, sediment concentrations, and water quality assessment.

The following reports will be prepared:

1. Quarterly progress reports,
2. Annual report,
3. Summary report

4. Manuscript for publication in refereed journal.

Discussion

Organic material contains nitrogen and phosphorous compounds that are released as inorganic nutrients during decomposition. Aquatic primary productivity utilizes the released nutrients to produce organic material. This cycle continues until an imbalance creates impaired water quality. The proposed study is intended to provide an understanding of how nutrients impact the nexus between organic loading in sediments, benthic communities, and the resulting water quality. Without such an understanding, it is difficult to evaluate the impact of sudden increases in organic inputs on the environmental health of the river.

The measured parameters are components of the carbon, nitrogen, and phosphorous cycles naturally occurring in aquatic systems. The resulting data is intended to permit analysis of the how nutrients coupling between organic sediment decomposition and the overlying water column impacts dissolved oxygen water quality

To assist in understanding results of the field experiments knowledge of the typical organic discharges to the river will be very helpful. Thus, we propose an additional task involving data review of all storm water and point source discharge records for the San Diego River. In addition, a field crew will survey the riverbank from Santee Lakes to Pacific Highway to record all visual indications of discharges or potential discharges to the river.

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Miller-Way, T., G. Boland, G.T. Rowe, and R. Twilley. 1994. Sediment oxygen consumption and benthic nutrient fluxes on the Louisiana continental shelf: A methodological comparison. *Estuaries* 17:809-815.

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Resh, V.H. and J.K. Jackson. 1993. Rapid assessment approaches to biomonitoring using benthic macroinvertebrates. In: D.M. Rosenberg and V.H. Resh, eds., Chapman and Hall, New York.

Rowe, G.T., G. Boland, W. Phoel, R. Anderson and P. Biscaye. 1994. Deep-sea floor respiration as an indication of lateral input of biogenic detritus from continental margins. *Deep-Sea Research II* 41:657-668.

Tasks

Task 1: Prepare Quality Assurance Program Plan (QAPP)
Task 2: Finalize experimental site selection
Visit sites, determine access and required permissions
Task 3: Fabricate sediment flux chambers and field test

Task 4: Prepare sampling equipment, jars, preservatives for CSPB sampling
Task 5: Mobilize for six-site experimental event
Task 6: Conduct field sampling and analysis
Each experimental event is expected to require one week in the field
Task 7: Benthos identifications
Task 8: Prepare Quarterly Report

Tasks 4 through 8 will be repeated 12 times.

Task 9: Sediment testing
Task 10: Discharge Survey
Task 11: Prepare Annual report
Task 12: Prepare Final Report
Task 13: Attend meetings as needed

PART A - COVER PAGE

STATE WATER RESOURCES CONTROL BOARD
SFY 2001 Costa-Machado Water Act of 2000
Chapter 6, Article 2, Watershed Protection Program

APPLICANT: County of San Diego, Department of Environmental Health

ADDRESS: P.O. Box 129261
San Diego, CA 92112-9261

PROJECT DIRECTOR: Teresa Brownyard

E-MAIL ADDRESS: Tbrowneh@co.san-diego.ca.us **FAX NO.:** 619-

PHONE NO.: 619-338-2410 **FEDERAL TAX ID. NO.:** 95000934

Talk w/ Bruce P on status

PROJECT TITLE: San Diego River Watershed Management Plan

PROBLEM(S) BEING ADDRESSED:
Water is a scarce and finite resource in the San Diego Region. Burgeoning economic and population growth has denigrated water quality and placed increasing pressure on supplies. Maintaining water quality is of paramount importance because the Region relies primarily on imported supplies, captures little local runoff due to low precipitation levels, and is subject to periodic drought. Notwithstanding, San Diego is famous for its sunny weather and year-round recreation. Each year more than 25 million people visit San Diego area beaches. Numerous concerns about the pollution of beaches have been raised, threatening a major resource on which the tourism economy is based. The San Diego River is one of the largest and most important sources of urban runoff into the waters off San Diego. Controlling pollution in this watershed is critical to preserving our aquatic resources and the economic basis of this region. The San Diego River Watershed (SDRW) has the largest population in San Diego County and is the second largest hydrologic unit (San Diego Hydrologic Unit 907.00) in this region. The western half of this watershed is highly urbanized, while the eastern half is still primarily natural and undeveloped. Beaches in SDRW have a history of shoreline monitoring exceedances due to sewage spills and nonpoint source urban runoff. The threats to the designated beneficial uses for the SDRW include pathogens, habitat degradation and loss, nutrients/eutrophication, non-native invasive species and trash dumping. Further threats are dissolved oxygen in the surface waters and salinity, nitrates, petroleum, MTBE and solvents in the groundwater. In addition, the lower San Diego River has a history of damaging flood episodes and is considered to be at high risk of major future flooding. The frequency of flooding and the magnitude of damage increase as more urbanization occurs within the SDRW. This project addresses the need for an integrated management plan to guide a multifaceted solution to the degradation of the SDRW. Specific issues to be addressed are: 1) threats to water quality due to sewage and various nonpoint sources of urban runoff that affect natural habitat, wetlands and the health of threatened and endangered species; 2) protection of the Santee-El Monte groundwater recharge aquifers and basins from contamination of urban and industrial runoff; 3) flooding that results in harm to people, property and the natural ecosystem; and 4) watershed, wetland and river restoration.

WATERBODY/WATERSHED: San Diego River Watershed (San Diego Hydrologic Unit 907.00)

FISCAL SUMMARY:
Prop 13 Funds Requested $197,500 (minimum [$50,000]/maximum [$5,000,000])

PROJECT SUMMARY:
We propose to develop and implement a comprehensive and sustainable watershed management plan (WMP) to restore and protect water quality in the SDRW. The WMP 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 SDRWQCB basin plan. Collaboration with key stakeholders will be a major component so that it will be mutually beneficial and in the public interest. We seek to align 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. This creation of a common vision among the many stakeholders is also crucial to its success. Due to its size and the complexity of the issues, the SDRW will be divided into two major areas, Lower and Upper, so that we can better address areas of concern in the planning process. Specific issues to be addressed in the Lower SDRW include, 1) NPS pollution, 2) coastal water quality, 3) groundwater protection, 3) wetlands protection, 4) flooding, and 5) recreation. Specific issues to be addressed in the Upper SDRW include, 1) protection of surface water supplies, 2) habitat protection, 3) NPS pollution, 3) recreation, 4) flood management warning, 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.

PART C - PROJECT QUESTIONNAIRE

1. **PROJECT TITLE:** San Diego River Watershed Management Plan

2. **LEAD AGENCY:** County of San Diego, Department of Environmental Health

ADDRESS: P.O. Box 129261
San Diego, CA 92112-9261

PROJECT DIRECTOR: Teresa Brownyard

E-MAIL ADDRESS: Tbrowneh@co.san-diego.ca.us **FAX NO.:** 619-338-2174 or 619-338-2848

PHONE NO.: 619-338-2410

3a. WATERSHED IN WHICH THE PROJECT WILL BE UNDERTAKEN: San Diego River Watershed (San Diego HU 907.00)

3b. COUNTY IN WHICH THE PROJECT WILL BE UNDERTAKEN: San Diego County

3c. IS THE PROPOSED PROJECT WITHIN THE CALFED SOLUTION AREA? X yes ___ no

3d. Do you want your project forwarded to CALFED to alert CALFED to your need for funding? X yes __ no

4. IDENTIFY THE MAJOR SOURCES OF NPS POLLUTION THAT WILL BE ADDRESSED BY THE PROPOSED PROJECT (CHECK ALL APPROPRIATE SOURCES).

_X_Agriculture _X_Forestry _X_Urban (Construction, Roads, Septic Systems) _X_Stormwater/Urban Runoff _X_Marinas and Boating Activities _X_Hydromodification __X_Resource Extraction Other: _____

5. PROPOSAL DESCRIPTION

a. PROBLEM STATEMENT

The San Diego River watershed (SDRW) is a long, triangular area that originates in the Cuyamaca Mountains in eastern San Diego County and drains more than 30 miles west to the Pacific Ocean. At 277,543 acres (440 mi²), it is the second largest hydrologic unit (San Diego Hydrologic Unit 907.00) in San Diego County and contains the largest population (~476,000) of all the County's watersheds. It is comprised of four hydrologic areas (Lower San Diego, San Vicente, El Capitan & Boulder Creek) and fifteen hydrologic subareas, each of which is currently experiencing problems typical of increasing urbanization. While much of the upper eastern portion of the SDRW remains vacant or undeveloped (58.4%), a projected population increase of more than 20% over the next 15 years will intensify these pressures. Existing resources within the SDRW are extremely diverse. These include five surface water reservoirs, a large groundwater aquifer, and extensive riparian habitat, coastal wetlands, and coastal tidepools. Land uses are also highly varied, and include residential areas, mining operations, transportation, agriculture, commercial and industrial uses, and recreation. A number of problems associated with increasing urbanization currently impair or threaten these resources and uses. Examples include pathogens, eutrophication, invasion of non-native species, habitat degradation and loss, oxygen depletion, littering, and the introduction of numerous contaminants such as nitrates, petroleum, MTBE, and solvents to surface and groundwater. Additionally, high TDS from imported water increases the salinity of streams and freshwater habitat. The coastal portion of the SDRW also has a history of shoreline monitoring exceedances due to both sewage spills and urban runoff, and flooding is particularly acute during heavy rains due to development of the flood plain. Planning efforts to date have been poorly coordinated, have often failed to address many of these important environmental issues and concerns, and are not currently capable of meeting these increased pressures. This project will focus on the development of a comprehensive Watershed Management Plan (WMP) within which these issues can be more adequately addressed. In doing so, a variety of contaminant sources, resource issues, and potential management options will be explored.

Urbanization

The SDRW is typical of urbanized watersheds. Many common nonpoint source pollutants contaminate the San Diego River and surrounding surface waters. These include pathogens, nutrients, sediment, oxygen-demanding substances, oil/grease, heavy metals, toxic chemicals and floatables. The United States Environmental Protection Agency ranks nonpoint source pollution as the highest ecological risk impacting our region. The SDRW has a high urban runoff potential, with 10.6% of land area above 25% imperviousness. Land uses within the SDRW are moderately diverse, but about one-fourth of the total land area consists of "urban" uses[1] (see Table 1 below). Approximately 78,610 acres (28%) of the SDRW is urbanized, developed with streets, freeways, parking lots, housing, schools, offices, commercial and industrial uses, most of which is concentrated in the lower region. Approximately 476,000 residents live in the SDRW, primarily within these urban land use areas, which is the largest population of all the County's watersheds. Compounding the contamination issues associated with this existing urbanization, a significant portion of the upper, eastern portion of the watershed (58.4%) is still vacant or undeveloped, an important point since growth in the SDRW is projected to increase by more than 20% by 2015. Since contaminant loadings can reasonably be expected to increase with further urbanization of the watershed, this emphasizes the need to better characterize the respective contributions of potential sources and to identify effective management options now. Strides have been made to designate key portions of the watershed (13.3%) for open space and parkland, but there is a great need to implement protection plans and identify other areas needing protection. Additionally, agriculture and mining operations occur in the upper portion of the SDRW, further supporting the need for a comprehensive planning effort.

[1] Source: Watersheds of the San Diego Region (SANDAG, March-April 1998)

plant assemblages, offer little useful cover or nest opportunities for birds, and interfere with flood control. The biological resources along the River, Lake Murray, Kumeyaay Lake, and Santee Lakes are among the most sensitive and adversely affected by water pollution and urban development. Just east of Mission Trails is the Santee Lakes Water Reclamation and Recreation Park, which treats and reclaims one million gallons per day of wastewater, some of which is discharged into the River. Due to its proximity to the River, Santee Lakes has the highest amount of avian biodiversity in San Diego County. East of Santee Lakes are a series of parks along the River that support multiple uses including riparian habitat protection, recreation, residential uses, commercial development, and biking and equestrian trails. Famosa Slough, near the mouth River, also harbors extremely productive wetlands habitat. Unfortunately since the River is channelized, and the lower SDRW areas are paved, the wetland is occasionally blown out to sea and has to rebuild. South of the mouth of the River is Sunset Cliffs, a 68-acre park that stretches along the Pacific coastline. West of this is the Point Loma Ecological Marine Reserve containing fragile tide-pool and kelp forest ecosystems. The north-south flow of the California Current drags sediment and pollutants from the River to the Sunset Cliffs shoreline, resulting in significant adverse effects on the functioning of coastal ecosystems following storm events. Directly upstream from the river mouth is Mission Valley. Ongoing urban development of the River floodplain in this area has resulted in significant increases in flood events, polluted urban runoff, and the destruction of riparian habitat. A number of efforts to acquire, protect, and enhance open space in the SDRW have been initiated. The Mission Valley Preserve, a 51-acre preserve along the River which provides breeding and nesting habitat for migratory and endemic songbirds and waterfowl was created in October 2000. Along the eastern portion of the SDRW, Mission Trails Regional Park covers almost 5,800 acres of coastal mountains, hills, lakes and the Riverbed. This is the largest urban park on the West Coast, and provides riparian, grasslands, coastal sage, scrub chaparral, vernal pool and oak woodland habitat for native species such as the great blue heron, red-tailed hawk, golden eagle, kestrel, migratory song birds, mule deer, bobcat, coyote, and mountain lion. Unfortunately, in spite of these accomplishments, future development of habitat is a critical issue for the SDRW. Much of the river flood plain in Lakeside and other areas is undeveloped and contains considerable riparian habitat that houses key species such as the endangered arroyo toad, least bell's vireo and the southwestern pond turtle. Zoning in many of these areas is currently not protective of sensitive habitat, and often allows industrial and commercial uses such as sand mining.

Flooding

Flooding is a particularly important issue in the SDRW. Because many years usually pass between major flood episodes, development has been allowed to expand into the floodplains. Although El Capitan and San Vicente reservoirs were built to provide more water for the region and to reduce the risk of flooding in the lower valley, significant development has continued throughout the western half of the SDRW. Today, this area is densely urbanized, with a large population at risk of disastrous flooding. In 1980, the situation was so severe that emergency officials who feared a 100-year flood event evacuated the entire Mission Valley region. The damage was substantial. At present, this area is considered to have a high risk of flooding by FEMA, the California State Department of Water Resources and the California-Nevada River Forecast Center (CNRFC). Recognizing this danger, the City of San Diego, the County of San Diego, the U.S. Geological Survey (USGS), the National Weather Service (NWS) and the CNRFC have established a network of automated rain and stream monitoring stations throughout the SDRW. Unfortunately, this flood warning system will not prevent flooding. Other sound watershed management solutions are necessary to further reduce the risk of disastrous floods. The increasing urbanization taking place in the western SDRW makes such planning essential. Flooding risks to the SDRW are also exacerbated by non-native invasive species such as Arundo, which not only choke out the native riparian habitat, but also accumulates in large mats of debris during floods, forming dams against bridges and culverts and substantially increasing flood damage. The potential for increased river scour during flooding due to the sand-mining operations taking place is also substantial. This increased scouring often results in severe damage to bridges, natural channels and native habitat. Similarly, sedimentation caused by winter rains falling on areas burned by wildfires can cause significant erosion.

5b. SPECIFIC WATER QUALITY GOALS INVOLVED

We intend to preserve and enhance the environmental quality of the SDRW through the development of an integrated WMP for the SDRW. We will focus on protecting beneficial uses as described in the RWQCB's Water Quality Control Plan for the San Diego Basin (9) (or Basin Plan). Major 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.

Water Supply Reservoirs: (1) Protect surface water reservoirs from urban runoff and sedimentation; and (2) Ensure the ability of water supply reservoirs to meet increasing water storage and supply needs.

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.

subareas will be used as specific areas of consideration within the plan, as needed. Steering Committees (SC) will be established in these two areas that report to the TAC. The chair of each SC will sit as a member of the TAC, along with technical experts by subject matter. The use of physical, geologic and hydrologic boundaries, rather than political boundaries, provides numerous benefits for planning and management of water resources. The underlying scientific and physical facts revealed through a watershed analysis can shed objective light on discussions and make management decisions compatible with the needs of the watershed. Each SC will develop a "White Paper" pertinent to their geographical area and the TAC will assemble these White Papers into a "Stakeholder Input Report" which will provide the framework of the plan. The TAC will ensue the development of the WMP to be conducted in nine (9) Phases as follows.

Phase 1 - Assemble Project Team
Phase 2 - Establish Working Committees
Phase 3- Information Gathering
Phase 4- SDRW Assessment
Phase 5- WMP Framework
Phase 6 - WMP Development
Phase 7 - CEQA/NEPA Compliance and Preparation
Phase 8- WMP Adoption
Phase 9- WMP Implementation

Certain ongoing projects that will contribute to water quality in the SDRW have been started by other agencies. Goals of those projects include wetlands and watershed protection, flood control, nonpoint source pollution control, water conservation and reduced use of high TDS water in environmentally sensitive areas. The SDRW WAC proposes to participate in those projects in parallel with this overall planning process, in order to coordination watershed improvement activities and combine resources for more effective implementation. Therefore, individual projects may be planned and implemented before completing the overall planning process when clear benefits from such projects are evident.

5d. WORK TO BE PERFORMED/PROPOSED ACTIONS

i. ITEMIZED TASKS AND MILESTONES

TABLE 3: ITEMIZED TASKS AND MILESTONES

Task	*Deliverable(s)*	*Completion Date*
SWRCB Contract for Grant Award	1) Contract	Nov-01
Phase I: Assemble Project Team	1) Assign project manager, 2) RFP to contract with consultant, 3) Invitation to stakeholders and interested parties, 4) Public Notification	Nov-01
Phase 2: Establish Working Committees	1) Establish WAC, TAC, Lower SC & Upper SC, 2) Execute MOU	Dec-01
Phase 3: Information Gathering	1) Lower & 2) Upper SC White Papers, 3) Stakeholder Input Report	Jan-02
Phase 4: SDRW Assessment	1) Monitoring/Reporting Plan, 2) Quality Assurance Plan	Jul-02
Phase 5: WMP Framework	1) Goals/policies for plan, 2) Draft framework, 3) Host 3 Technical Workshops	Jul-03
Phase 6: WMP Development	1) Draft WMP, 2) Develop actions and guidelines for plan	Jan-04
Phase 7: CEQA/NEPA Preparation	CEQA/NEPA & applicable compliance	Jul-04
Phase 8: WMP Adoption	1) Final "dynamic" plan, 2) Documentation of Adoption	Oct-04
Phase 9: WMP Implementation	1) Final "dynamic" plan, 2) Implementation Plan, with schedule & methods, 3) Identify funding opportunities and joint partnerships	Begin Nov-04 (Ongoing)
Quarterly Reports	Four quarterly reports will be completed each year for the SWRCB	Jan/Apr/Jul/Oct
Final Report	Final Report to be completed for SWRCB	Nov-04

Phase 1 - Assemble Project Team: The County of San Diego, Department of Environmental Health will be responsible to assign a project manager, release an RFP to contract with an experienced consultant, and to invite stakeholders and interested parties to participate in the planning process. In addition, formal Public Notification will be conducted.

Phase 2 - Establish Working Committees: Determine stakeholders with interest in the watershed, and the ability to enter into an Memorandum of Understanding (MOU) to provide a binding agreement that provides a foundation for cost sharing. Members will act as the Watershed Advisory Committee (WAC), which will include elected officials, stakeholders, governmental agency officials, tribal leaders and technical advisors. The WAC will establish a Technical Advisory Committee (TAC) consisting of technical experts by subject matter, to coordinate the development of the WMP. The TAC will form 2 Steering Committees (SC), Lower and Upper, with the chair of each a member of the TAC.

Phase 3 - Information Gathering: The Steering Committees will compile an inventory of the physical characteristics, natural resources, boundaries of the watershed, land uses, physiography, climate, land use, population, water resources (coastal, surface, ground, imported surface, reclaimed) and water quality information pertinent to their geographical area, Upper and Lower. Deliverables during this Phase include 1) SCs to complete "White Papers" (Upper & Lower) to identify issues and summarize data collected for each geographical area, and 2) TAC to release "Stakeholder Input Report" which serves to compile the White Papers into one report to the WAC.

Phase 4- SDRW Assessment: The TAC will review available water quality data and results of monitoring in the SDRW to identify the contaminants of concern and the natural and human related sources of contaminants and make recommendations to mitigate current and future impacts. Additionally the TAC will: 1) review "Stakeholder Input Report" and "White Papers", 2) evaluate existing monitoring system points, 3) develop criteria to measure success of monitoring points, 4) recommend new monitoring points, if appropriate, 5) develop draft Monitoring/Reporting Plan and Quality Assurance. The Monitoring system should not only monitor for existing pollutants but also provide information on new pollutants that could impact water quality.

"Watershed-based Program for Identifying and Managing Sources of Recreational Water Impairment" to be conducted in the SDRW, to consist of grab sampling at a number of fixed locations throughout the SDRW during wet and dry weather conditions. Results will be analyzed for total coliform, fecal coliform, and enterococcus, and plotted. Utilizing the combined resources of the County DEH, the San Diego State University (SDSU) Graduate School of Public Health, and the City of San Diego Water Department a baseline ambient assessment of indicator bacteria levels will be conducted through this project. The County DEH and SDSU will focus on monitoring downstream of the reservoirs and in coastal waters, and the San Diego Water Department will conduct the monitoring at the reservoirs and upstream of the reservoirs. The participation of watershed stakeholders will be solicited in designing and carrying out this monitoring program. State-certified environmental laboratories using already established Quality Control/Quality Assurance programs analyze samples for ambient bacterial levels. Results will be used in Phase 3 and 4 of the WMP development (see Table 3).

i. Citizen monitoring will be used through the San Diego Stream Team volunteers.
ii. AB411 Recreational Water Quality Monitoring at coastal sites with in the SDRW. Monitoring will be oriented toward ambient water and habitat quality. As well as, to determine the effectiveness of restoration or management measures. The SDST's baseline bioassessment data along with results of ongoing monitoring will provide information regarding the health of a stream, and tools with which to diagnose problems and perhaps establishes sources of problems.

6. SWRCB or RWQCB STAFF CONTACTED REGARDING THIS PROPOSAL:

RWQCB Contact:	Bruce Posthumus & ~~Cynthia Gorham-Test~~ Mike Porter	SWRCB Contact:	Jean Ladyman & Ken Harris
Phone No.:	858-467-2964 & 858-467-4285	Phone No.:	916-341-5475 & 916-341-5500
Dates contacted:	9/7/00, 12/15/00, 1/25/01 & 1/2/01, 1/12/01, 1/17/01	Dates contacted:	Many calls re: general questions

7. COOPERATING AGENCIES:

Agency Name	Role/Contribution to Project	Contact Person	E-mail address	Phone No.
County of San Diego ♦ Environmental Health ♦ Flood Control	 Lead Hydrology, flooding issues	 Teresa Brownyard Tim Stanton	 Tbrowneh@co.san-diego.ca.us Tstantpw@co.san-diego.ca.us	 619-338-2203 858-694-3722
City of San Diego ♦ Water Department ♦ Stormwater Administrator	 Water supply reliability Jurisdictional partner	 Robert Collins Karen Henry	 Ewc@sddpc.snnet.gov Kgh@street.sannet.gov	 619-668-2084 619-525-8644
City of Santee	Jurisdictional partner	Cary Stewart	Cstewart@ci.santee.ca.us	619-258-4100
City of El Cajon	Jurisdictional partner	Dennis Davies	Ddavies@ci.el-cajon.ca.us	619-441-1661
City of La Mesa	Jurisdictional partner	Dris Elwardi	Delwardi@ci.la-mesa.ca.us	619-667-1152
San Diego County Water Authority	Water supply reliability	Paul Gerbert	Pgebert@sdcwa.org	619-682-4161
San Diego State University ♦ Department of Geology ♦ Institute for Regional Studies of the Californias	Technical experts GIS & visualization systems Watershed policy &planning	 Dr. Richard Wright Dr. Susan M. Michael, Ph.D.	 Wright@typhoon.sdsu.edu Smichel61@aol.com	 619-594-5466 619-449-4008
Ramona Municipal Water District	Water supply reliability	Kit Kesinger	Kkesi@sfketema.com	619-441-5489
The Environmental Trust, San Diego Stream Team	Technical expert in bioassement and monitoring	Neal Biggart	Nbiggart@tet.org	619-461-1833
Iron Mountain Conservancy	Technical expert riparian habitat	Kit Kesinger	Savewilds@aol.com	619-441-5489

Resolutions adopted (attached) in support of this proposal:

- City of El Cajon (Resolution No. 9-01, adopted January 23, 2001)
- City of Santee (Resolution No. 12-2001, adopted January 24, 2001)

Letters of supports (attached) for this proposal have been provided by:

- San Diego County Water Authority (SDCWA)
- City of San Diego Water Department (CSDWD)
- City of San Diego, Stormwater Administrator
- San Diego Stream Team
- The Environmental Trust
- SDSU, Department of Geology

Three SDRW planning meetings where held on January 3rd, 17th, & 26th to facilitate writing this proposal. Stakeholders strongly supported this effort and offered active assistance in preparing it. Participants at these meetings, and others who reviewed draft proposals, included Cary Stewart (City of Santee), Robert Zaino (City of Santee), Frank Boydston (City of Santee), Robert Collins (City of San Diego Water Dept.), Jeff Pasek ((City of San Diego Water Dept.), Mark Stone (City of San Diego Water Dept.), Dennis Davies (City of El Cajon), Paul Gerbert (San Diego County Water Authority), Jim Peugh (Friends of Famosa Slough & San Diego Audubon Society), Neal Biggart (Environmental Trust & San Diego Stream Team), Dr. Richard Wright (SDSU), Dr. Suzanne Michel (SDSU), Kit Kesinger (Iron Mountain Conservancy & Ramona Municipal Water District), George Wilkins (County Flood Control), Tracy Cline (County Planning), Teresa Brownyard (County Environmental Health), Jon VanRhyn (County Environmental Health), Mike Porter (County Environmental Health), Donald Steuer (County DCAOs Office), Cynthia Gorham-Test (SDRWQCB), Al

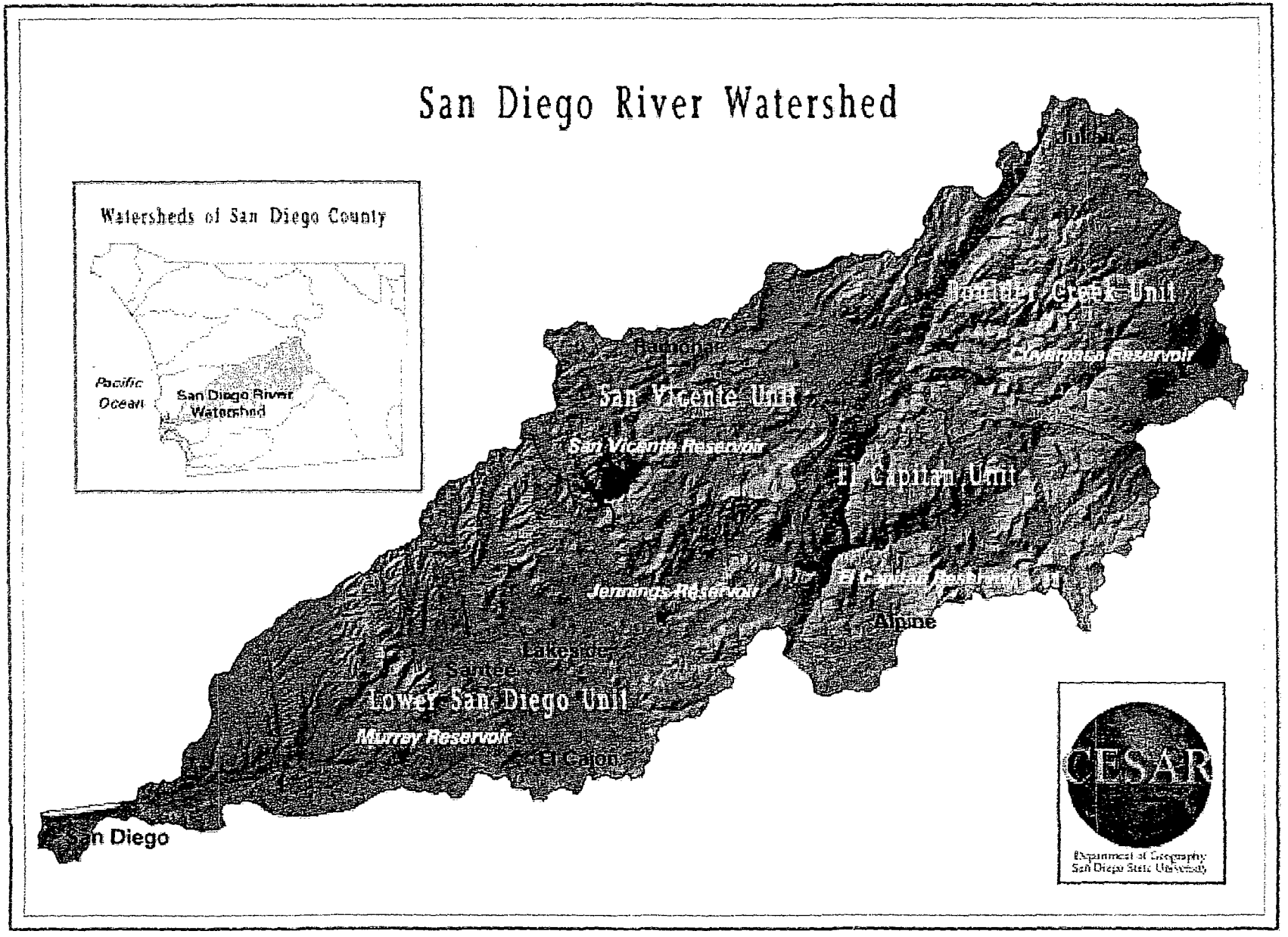
- Mission Valley Preserve, Mission Trails Regional Park, Santee Lakes, Famosa Slough, and Mast Park in Santee, for preservation
- Drop structures were installed along the River to reduce flow velocity and storm drain stenciling is conducted regularly throughout SDRW
- General Plan 2020 may add support 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.
- In 1998, Santee voters rejected development of the Fanita Ranch parcel to seek funding and consensus based development options to protect wetlands areas, improve water quality in the San Diego River and decrease habitat fragmentation.

15. **DESCRIBE HOW THE PROJECT WILL RESULT IN ONGOING OR WIDESPREAD IMPLEMENTATION THROUGHOUT THE PROJECT AREA, REGION, OR STATE.** Several factors will help to ensure the ongoing implementation of this WMP after the requested Proposition 13 funds are expended. First, a major objective of the effort is to develop agency and stakeholder commitment to the funding and implementation of project recommendations and deliverables. It is not intended that the requested Proposition 13 monies will be used to fund specific implementation elements, but rather to establish a framework for the coordination of efforts. The project team and stakeholders are committed to continuing to identify and obtain additional funding to sustain this and other related efforts into the future. Second, the October 2000 initiation of Project Clean Water by the County of San Diego will provide a provide a forum for assembling the people, resources, and information necessary to cooperatively create a regional commitment to water quality management efforts. This complements and provides a context for the proposed project. More importantly, it leverages the resources available for project planning and implementation in this and other watersheds. Third, the commitment of the County of San Diego to manage the project will ensure the ongoing availability of the technical and regulatory staff resources that will be needed throughout the remaining development and implementation phases.. The collective experience and expertise contained within the County Departments of Environmental Health, Planning and Land Use, Public Works, and Parks and Recreation is extensive and will provide significant ongoing resources for the project. It is also anticipated that a revised Municipal Stormwater permit will be issued for the SDHR that requires the implementation of urban runoff management activities on a watershed basis. Although these requirements will apply only to stormwater runoff management, the development and application of these programs will require similar stakeholder input and implementation processes. This again will result in the availability of additional resources to support this project.

16. **DESCRIBE HOW THE PROJECT WILL DEMONSTRATE A CAPABILITY OF SUSTAINING WATER QUALITY BENEFITS FOR A PERIOD OF 20 YEARS AS REQUIRED BY PROP 13 (79080(d)(2)).** Once completed, this WMP will serve as an umbrella over existing and future projects and planning efforts in the SDRW. By providing a framework for increased coordination between efforts, which are currently initiated and conducted independently, our overall ability to address water quality issues will be significantly enhanced. In essence, this will provide the opportunity to institutionalize water quality issues as a component of all planning efforts within the SDRW, to provide a forum for their continued discussion, and to integrate the management of surface water, groundwater, habitat, and flooding issues into a common planning framework. While the long-term sustenance of water quality cannot be guaranteed through planning efforts alone, the likelihood of achieving this end increases proportionally to the degree of communication and coordination between participants. The execution of a MOU and the planned establishment of a WAC which includes elected officials, stakeholders, governmental agency officials, and technical advisors likewise supports this objective by providing a strong commitment and foundation for change. Additionally, the WMP will have a menu of options from which to select to carry out the actions necessary to reach plan goals and objectives. It is anticipated that the actions identified in the plan will occur over time and that monitoring will continue at the coast as required by AB411. Three technical workshops will be conducted which will provide a forum for public involvement in the planning process that is vital in ensuring success.

17. **IF THERE IS AN NPDES PERMIT REQUIRED FOR THIS PROJECT AREA (CHECK WITH YOUR RWQCB), DESCRIBE THE RELATIONSHIP OF THE PROJECT TO THE PERMIT.** There are three NPDES general stormwater permits applicable to the project area; (1) municipal, (2) industrial, and (3) construction. The municipal permit requires that copermittees identify and implement BMPs to reduce or eliminate contaminants in urban runoff to the maximum extent practicable. The proposed planning effort is not required by, but complements, the objectives of this permit. There are seven additional NPDES permits in the San Diego HU (one major and six minor). The relevance of these, as well as the industrial and construction permits, to the proposed project is minor, but they will be considered in the development of the WMP. Additionally, the development of a future TMDL for coliform bacteria in the SDRW is scheduled for completion by 2006. The attainment of water quality standards will likely involve both watershed management planning and the enforcement of increased requirements under municipal stormwater NPDES permits. These efforts will require greater coordination in the future.

18. **FOR PROP 13 PROJECTS, IDENTIFY THE NPS MANAGEMENT MEASURE(S) THAT THE PROPOSED PROJECT WILL IMPLEMENT AND DESCRIBE HOW YOU WILL BE ABLE TO TRACK OR ACCOUNT FOR THE IMPLEMENTATION OF THESE MEASURES.** As described in section 5.b., we propose to implement applicable management measures to address following priority areas of concern: 1) urban, 2) wetland, riparian, and vegetated treatment systems, and 3) hydromodification. Specific management measures to address urban sources of NPS pollution include; 1) erosion/sediment and chemical control on construction sites, 2) controls for new and operating on-site disposal systems, 3) requirements for planning, siting, and developing


San Diego River Watershed
Watersheds of San Diego County
Pacific Ocean
San Diego River Watershed
Julian
Barona
San Vicente Unit
San Vicente Reservoir
El Capitan Unit
Jennings Reservoir
Alpine
Lakeside
Santee
Lower San Diego Unit
Murray Reservoir
El Cajon
San Diego
CESAR
Department of Geography
San Diego State University

From: Bruce Posthumus
To: Alan Monji
Date: 7/12/01 2:32PM
Subject: Re: Prop 13 status on San Diego River

Alan -

On the ranked list adopted by the SWRCB, the SD River WMP proposal was ranked above the funding cutoff, so it will be funded.

Also see attached EO report for the June 13 RB meeting.

>>> Alan Monji 07/12/01 11:42AM >>>
Bruce

Can you tell me the status of San Diego River Watershed Management Plan proposed by Teresa Brownyard at the County of San Diego. I am reviewing the San Diego River for the 303d list and want to know if this project has received Regional and State approval.

Thanks

Alan

SWRCB Approval of Proposition 13 Grant Proposal Priority Lists *(Bruce Posthumus)*

At its meeting on May 17, 2001, the SWRCB approved the ranked priority lists of proposals submitted for funding in the first round of the Proposition 13 competitive grant programs administered by the SWRCB. Statewide, a total of 374 eligible proposals requesting a total of $222 million were received. A total of $21.8 million was available on a competitive basis for three programs. Based on the approved lists and the funding available, grants will be awarded to the following San Diego region projects.

WATERSHED PROTECTION PROGRAM				
#	PROJECT	APPLICANT	GRANT AMOUNT	HYDROLOGIC UNIT
1	Regional Wetlands & Watershed Management Plan for Coastal Southern California	Environment Now	$607,500	All (& regions 3, 4 & 8)
2	Santa Margarita River Watershed Management Plan	San Diego County Flood Control District	$200,000	Santa Margarita
3	Los Peñasquitos Master Watershed Plan	City of San Diego	$200,000	Peñasquitos
4	San Diego River Watershed Management Plan	County of San Diego Department of Environmental Health	$197,500	San Diego
5	Otay River Watershed Management Plan	County of San Diego	$200,000	Otay
6	Tijuana River Watershed Management Plan	San Diego County Flood Control District	$200,000	Tijuana
			TOTAL: $1,605,000	

NONPOINT SOURCE POLLUTION CONTROL PROGRAM				
#	PROJECT	APPLICANT	GRANT AMOUNT	HYDROLOGIC UNIT
1	Dairy Fork Biofiltration Basin in Aliso Creek	County of Orange Public Facilities and Resources Department	$215,000	San Juan
2	Munger Storm Drain Filtration	County of Orange Public Facilities and Resources Department	$204,500	San Juan
3	Los Peñasquitos Sediment Retention Project	Los Peñasquitos Lagoon Foundation	$960,441	Peñasquitos
			TOTAL: $1,379,941	

COASTAL NONPOINT SOURCE CONTROL PROGRAM				
#	PROJECT	APPLICANT	GRANT AMOUNT	HYDROLOGIC UNIT
1	Wetland Capture and Treatment Network	City of Laguna Niguel	$153,750	San Juan
2	Reduction of Agricultural Nonpoint Source Pollution in the Coastal Watersheds of Region 9	University of California Cooperative Extension	$300,000	San Juan, Santa Margarita, San Luis Rey, Carlsbad & Tijuana
			TOTAL: $453,750	

PART A - COVER PAGE

STATE WATER RESOURCES CONTROL BOARD
SFY 2001 Costa-Machado Water Act of 2000
Chapter 6, Article 2, Watershed Protection Program

APPLICANT: County of San Diego, Department of Environmental Health

ADDRESS: P.O. Box 129261
San Diego, CA 92112-9261

PROJECT DIRECTOR: Teresa Brownyard

E-MAIL ADDRESS: Tbrowneh@co.san-diego.ca.us **FAX NO.:** 619-338-2174 or 619-338-2848

PHONE NO.: 619-338-2410 **FEDERAL TAX ID. NO.:** 956000934

PROJECT TITLE: San Diego River Watershed Management Plan

PROBLEM(S) BEING ADDRESSED:
Water is a scarce and finite resource in the San Diego Region. Burgeoning economic and population growth has denigrated water quality and placed increasing pressure on supplies. Maintaining water quality is of paramount importance because the Region relies primarily on imported supplies, captures little local runoff due to low precipitation levels, and is subject to periodic drought. Notwithstanding, San Diego is famous for its sunny weather and year-round recreation. Each year more than 25 million people visit San Diego area beaches. Numerous concerns about the pollution of beaches have been raised, threatening a major resource on which the tourism economy is based. The San Diego River is one of the largest and most important sources of urban runoff into the waters off San Diego. Controlling pollution in this watershed is critical to preserving our aquatic resources and the economic basis of this region. The San Diego River Watershed (SDRW) has the largest population in San Diego County and is the second largest hydrologic unit (San Diego Hydrologic Unit 907.00) in this region. The western half of this watershed is highly urbanized, while the eastern half is still primarily natural and undeveloped. Beaches in SDRW have a history of shoreline monitoring exceedances due to sewage spills and nonpoint source urban runoff. The threats to the designated beneficial uses for the SDRW include pathogens, habitat degradation and loss, nutrients/eutrophication, non-native invasive species and trash dumping. Further threats are dissolved oxygen in the surface waters and salinity, nitrates, petroleum, MTBE and solvents in the groundwater. In addition, the lower San Diego River has a history of damaging flood episodes and is considered to be at high risk of major future flooding. The frequency of flooding and the magnitude of damage increase as more urbanization occurs within the SDRW. This project addresses the need for an integrated management plan to guide a multifaceted solution to the degradation of the SDRW. Specific issues to be addressed are: 1) threats to water quality due to sewage and various nonpoint sources of urban runoff that affect natural habitat, wetlands and the health of threatened and endangered species; 2) protection of the Santee-El Monte groundwater recharge aquifers and basins from contamination of urban and industrial runoff; 3) flooding that results in harm to people, property and the natural ecosystem; and 4) watershed, wetland and river restoration.

WATERBODY/WATERSHED: San Diego River Watershed (San Diego Hydrologic Unit 907.00)

FISCAL SUMMARY:
Prop 13 Funds Requested $197,500 (minimum [$50,000]/maximum [$5,000,000])

PROJECT SUMMARY:
We propose to develop and implement a comprehensive and sustainable watershed management plan (WMP) to restore and protect water quality in the SDRW. The WMP 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 SDRWQCB basin plan. Collaboration with key stakeholders will be a major component so that it will be mutually beneficial and in the public interest. We seek to align 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. This creation of a common vision among the many stakeholders is also crucial to its success. Due to its size and the complexity of the issues, the SDRW will be divided into two major areas, Lower and Upper, so that we can better address areas of concern in the planning process. Specific issues to be addressed in the Lower SDRW include, 1) NPS pollution, 2) coastal water quality, 3) groundwater protection, 3) wetlands protection, 4) flooding, and 5) recreation. Specific issues to be addressed in the Upper SDRW include, 1) protection of surface water supplies, 2) habitat protection, 3) NPS pollution, 3) recreation, 4) flood management warning, 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.

PART C - PROJECT QUESTIONNAIRE

1. **PROJECT TITLE:** San Diego River Watershed Management Plan

2. **LEAD AGENCY:** County of San Diego, Department of Environmental Health

ADDRESS: P.O. Box 129261
San Diego, CA 92112-9261

PROJECT DIRECTOR: Teresa Brownyard

E-MAIL ADDRESS: Tbrowneh@co.san-diego.ca.us **FAX NO.:** 619-338-2174 or 619-338-2848

PHONE NO.: 619-338-2410

3a. WATERSHED IN WHICH THE PROJECT WILL BE UNDERTAKEN: San Diego River Watershed (San Diego HU 907.00)

3b. COUNTY IN WHICH THE PROJECT WILL BE UNDERTAKEN: San Diego County

3c. IS THE PROPOSED PROJECT WITHIN THE CALFED SOLUTION AREA? X yes ___ no

3d. Do you want your project forwarded to CALFED to alert CALFED to your need for funding? X **yes** __ **no**

4. IDENTIFY THE MAJOR SOURCES OF NPS POLLUTION THAT WILL BE ADDRESSED BY THE PROPOSED PROJECT (CHECK ALL APPROPRIATE SOURCES).

_X_Agriculture _X_Forestry _X_Urban (Construction, Roads, Septic Systems) _X_Stormwater/Urban Runoff _X_Marinas and Boating Activities _X_Hydromodification __X_Resource Extraction Other: _____

5. PROPOSAL DESCRIPTION

a. PROBLEM STATEMENT

The San Diego River watershed (SDRW) is a long, triangular area that originates in the Cuyamaca Mountains in eastern San Diego County and drains more than 30 miles west to the Pacific Ocean. At 277,543 acres (440 mi²), it is the second largest hydrologic unit (San Diego Hydrologic Unit 907.00) in San Diego County and contains the largest population (~476,000) of all the County's watersheds. It is comprised of four hydrologic areas (Lower San Diego, San Vicente, El Capitan & Boulder Creek) and fifteen hydrologic subareas, each of which is currently experiencing problems typical of increasing urbanization. While much of the upper eastern portion of the SDRW remains vacant or undeveloped (58.4%), a projected population increase of more than 20% over the next 15 years will intensify these pressures. Existing resources within the SDRW are extremely diverse. These include five surface water reservoirs, a large groundwater aquifer, and extensive riparian habitat, coastal wetlands, and coastal tidepools. Land uses are also highly varied, and include residential areas, mining operations, transportation, agriculture, commercial and industrial uses, and recreation. A number of problems associated with increasing urbanization currently impair or threaten these resources and uses. Examples include pathogens, eutrophication, invasion of non-native species, habitat degradation and loss, oxygen depletion, littering, and the introduction of numerous contaminants such as nitrates, petroleum, MTBE, and solvents to surface and groundwater. Additionally, high TDS from imported water increases the salinity of streams and freshwater habitat. The coastal portion of the SDRW also has a history of shoreline monitoring exceedances due to both sewage spills and urban runoff, and flooding is particularly acute during heavy rains due to development of the flood plain. Planning efforts to date have been poorly coordinated, have often failed to address many of these important environmental issues and concerns, and are not currently capable of meeting these increased pressures. This project will focus on the development of a comprehensive Watershed Management Plan (WMP) within which these issues can be more adequately addressed. In doing so, a variety of contaminant sources, resource issues, and potential management options will be explored.

Urbanization

The SDRW is typical of urbanized watersheds. Many common nonpoint source pollutants contaminate the San Diego River and surrounding surface waters. These include pathogens, nutrients, sediment, oxygen-demanding substances, oil/grease, heavy metals, toxic chemicals and floatables. The United States Environmental Protection Agency ranks nonpoint source pollution as the highest ecological risk impacting our region. The SDRW has a high urban runoff potential, with 10.6% of land area above 25% imperviousness. Land uses within the SDRW are moderately diverse, but about one-fourth of the total land area consists of "urban" uses[1] (see Table 1 below). Approximately 78,610 acres (28%) of the SDRW is urbanized, developed with streets, freeways, parking lots, housing, schools, offices, commercial and industrial uses, most of which is concentrated in the lower region. Approximately 476,000 residents live in the SDRW, primarily within these urban land use areas, which is the largest population of all the County's watersheds. Compounding the contamination issues associated with this existing urbanization, a significant portion of the upper, eastern portion of the watershed (58.4%) is still vacant or undeveloped, an important point since growth in the SDRW is projected to increase by more than 20% by 2015. Since contaminant loadings can reasonably be expected to increase with further urbanization of the watershed, this emphasizes the need to better characterize the respective contributions of potential sources and to identify effective management options now. Strides have been made to designate key portions of the watershed (13.3%) for open space and parkland, but there is a great need to implement protection plans and identify other areas needing protection. Additionally, agriculture and mining operations occur in the upper portion of the SDRW, further supporting the need for a comprehensive planning effort.

[1] Source: Watersheds of the San Diego Region (SANDAG, March-April 1998)

plant assemblages, offer little useful cover or nest opportunities for birds, and interfere with flood control. The biological resources along the River, Lake Murray, Kumeyaay Lake, and Santee Lakes are among the most sensitive and adversely affected by water pollution and urban development. Just east of Mission Trails is the Santee Lakes Water Reclamation and Recreation Park, which treats and reclaims one million gallons per day of wastewater, some of which is discharged into the River. Due to its proximity to the River, Santee Lakes has the highest amount of avian biodiversity in San Diego County. East of Santee Lakes are a series of parks along the River that support multiple uses including riparian habitat protection, recreation, residential uses, commercial development, and biking and equestrian trails. Famosa Slough, near the mouth River, also harbors extremely productive wetlands habitat. Unfortunately since the River is channelized, and the lower SDRW areas are paved, the wetland is occasionally blown out to sea and has to rebuild. South of the mouth of the River is Sunset Cliffs, a 68-acre park that stretches along the Pacific coastline. West of this is the Point Loma Ecological Marine Reserve containing fragile tide-pool and kelp forest ecosystems. The north-south flow of the California Current drags sediment and pollutants from the River to the Sunset Cliffs shoreline, resulting in significant adverse effects on the functioning of coastal ecosystems following storm events. Directly upstream from the river mouth is Mission Valley. Ongoing urban development of the River floodplain in this area has resulted in significant increases in flood events, polluted urban runoff, and the destruction of riparian habitat. A number of efforts to acquire, protect, and enhance open space in the SDRW have been initiated. The Mission Valley Preserve, a 51-acre preserve along the River which provides breeding and nesting habitat for migratory and endemic songbirds and waterfowl was created in October 2000. Along the eastern portion of the SDRW, Mission Trails Regional Park covers almost 5,800 acres of coastal mountains, hills, lakes and the Riverbed. This is the largest urban park on the West Coast, and provides riparian, grasslands, coastal sage, scrub chaparral, vernal pool and oak woodland habitat for native species such as the great blue heron, red-tailed hawk, golden eagle, kestrel, migratory song birds, mule deer, bobcat, coyote, and mountain lion. Unfortunately, in spite of these accomplishments, future development of habitat is a critical issue for the SDRW. Much of the river flood plain in Lakeside and other areas is undeveloped and contains considerable riparian habitat that houses key species such as the endangered arroyo toad, least bell's vireo and the southwestern pond turtle. Zoning in many of these areas is currently not protective of sensitive habitat, and often allows industrial and commercial uses such as sand mining.

Flooding

Flooding is a particularly important issue in the SDRW. Because many years usually pass between major flood episodes, development has been allowed to expand into the floodplains. Although El Capitan and San Vicente reservoirs were built to provide more water for the region and to reduce the risk of flooding in the lower valley, significant development has continued throughout the western half of the SDRW. Today, this area is densely urbanized, with a large population at risk of disastrous flooding. In 1980, the situation was so severe that emergency officials who feared a 100-year flood event evacuated the entire Mission Valley region. The damage was substantial. At present, this area is considered to have a high risk of flooding by FEMA, the California State Department of Water Resources and the California-Nevada River Forecast Center (CNRFC). Recognizing this danger, the City of San Diego, the County of San Diego, the U.S. Geological Survey (USGS), the National Weather Service (NWS) and the CNRFC have established a network of automated rain and stream monitoring stations throughout the SDRW. Unfortunately, this flood warning system will not prevent flooding. Other sound watershed management solutions are necessary to further reduce the risk of disastrous floods. The increasing urbanization taking place in the western SDRW makes such planning essential. Flooding risks to the SDRW are also exacerbated by non-native invasive species such as Arundo, which not only choke out the native riparian habitat, but also accumulates in large mats of debris during floods, forming dams against bridges and culverts and substantially increasing flood damage. The potential for increased river scour during flooding due to the sand-mining operations taking place is also substantial. This increased scouring often results in severe damage to bridges, natural channels and native habitat. Similarly, sedimentation caused by winter rains falling on areas burned by wildfires can cause significant erosion.

5b. SPECIFIC WATER QUALITY GOALS INVOLVED

We intend to preserve and enhance the environmental quality of the SDRW through the development of an integrated WMP for the SDRW. We will focus on protecting beneficial uses as described in the RWQCB's Water Quality Control Plan for the San Diego Basin (9) (or Basin Plan). Major 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.

Water Supply Reservoirs: (1) Protect surface water reservoirs from urban runoff and sedimentation; and (2) Ensure the ability of water supply reservoirs to meet increasing water storage and supply needs.

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.

subareas will be used as specific areas of consideration within the plan, as needed. Steering Committees (SC) will be established in these two areas that report to the TAC. The chair of each SC will sit as a member of the TAC, along with technical experts by subject matter. The use of physical, geologic and hydrologic boundaries, rather than political boundaries, provides numerous benefits for planning and management of water resources. The underlying scientific and physical facts revealed through a watershed analysis can shed objective light on discussions and make management decisions compatible with the needs of the watershed. Each SC will develop a "White Paper" pertinent to their geographical area and the TAC will assemble these White Papers into a "Stakeholder Input Report" which will provide the framework of the plan. The TAC will ensue the development of the WMP to be conducted in nine (9) Phases as follows.

Phase 1 - Assemble Project Team
Phase 2 - Establish Working Committees
Phase 3- Information Gathering
Phase 4- SDRW Assessment
Phase 5- WMP Framework
Phase 6 - WMP Development
Phase 7 - CEQA/NEPA Compliance and Preparation
Phase 8- WMP Adoption
Phase 9- WMP Implementation

Certain ongoing projects that will contribute to water quality in the SDRW have been started by other agencies. Goals of those projects include wetlands and watershed protection, flood control, nonpoint source pollution control, water conservation and reduced use of high TDS water in environmentally sensitive areas. The SDRW WAC proposes to participate in those projects in parallel with this overall planning process, in order to coordination watershed improvement activities and combine resources for more effective implementation. Therefore, individual projects may be planned and implemented before completing the overall planning process when clear benefits from such projects are evident.

5d. WORK TO BE PERFORMED/PROPOSED ACTIONS

i. ITEMIZED TASKS AND MILESTONES

TABLE 3: ITEMIZED TASKS AND MILESTONES

Task	*Deliverable(s)*	*Completion Date*
SWRCB Contract for Grant Award	1) Contract	Nov-01
Phase I: Assemble Project Team	1) Assign project manager, 2) RFP to contract with consultant, 3) Invitation to stakeholders and interested parties, 4) Public Notification	Nov-01
Phase 2: Establish Working Committees	1) Establish WAC, TAC, Lower SC & Upper SC, 2) Execute MOU	Dec-01
Phase 3: Information Gathering	1) Lower & 2) Upper SC White Papers, 3) Stakeholder Input Report	Jan-02
Phase 4: SDRW Assessment	1) Monitoring/Reporting Plan, 2) Quality Assurance Plan	Jul-02
Phase 5: WMP Framework	1) Goals/policies for plan, 2) Draft framework, 3) Host 3 Technical Workshops	Jul-03
Phase 6: WMP Development	1) Draft WMP, 2) Develop actions and guidelines for plan	Jan-04
Phase 7: CEQA/NEPA Preparation	CEQA/NEPA & applicable compliance	Jul-04
Phase 8: WMP Adoption	1) Final "dynamic" plan, 2) Documentation of Adoption	Oct-04
Phase 9: WMP Implementation	1) Final "dynamic" plan, 2) Implementation Plan, with schedule & methods, 3) Identify funding opportunities and joint partnerships	Begin Nov-04 (Ongoing)
Quarterly Reports	Four quarterly reports will be completed each year for the SWRCB	Jan/Apr/Jul/Oct
Final Report	Final Report to be completed for SWRCB	Nov-04

Phase 1 - Assemble Project Team: The County of San Diego, Department of Environmental Health will be responsible to assign a project manager, release an RFP to contract with an experienced consultant, and to invite stakeholders and interested parties to participate in the planning process. In addition, formal Public Notification will be conducted.

Phase 2 - Establish Working Committees: Determine stakeholders with interest in the watershed, and the ability to enter into an Memorandum of Understanding (MOU) to provide a binding agreement that provides a foundation for cost sharing. Members will act as the Watershed Advisory Committee (WAC), which will include elected officials, stakeholders, governmental agency officials, tribal leaders and technical advisors. The WAC will establish a Technical Advisory Committee (TAC) consisting of technical experts by subject matter, to coordinate the development of the WMP. The TAC will form 2 Steering Committees (SC), Lower and Upper, with the chair of each a member of the TAC.

Phase 3 - Information Gathering: The Steering Committees will compile an inventory of the physical characteristics, natural resources, boundaries of the watershed, land uses, physiography, climate, land use, population, water resources (coastal, surface, ground, imported surface, reclaimed) and water quality information pertinent to their geographical area, Upper and Lower. Deliverables during this Phase include 1) SCs to complete "White Papers" (Upper & Lower) to identify issues and summarize data collected for each geographical area, and 2) TAC to release "Stakeholder Input Report" which serves to compile the White Papers into one report to the WAC.

Phase 4- SDRW Assessment: The TAC will review available water quality data and results of monitoring in the SDRW to identify the contaminants of concern and the natural and human related sources of contaminants and make recommendations to mitigate current and future impacts. Additionally the TAC will: 1) review "Stakeholder Input Report" and "White Papers", 2) evaluate existing monitoring system points, 3) develop criteria to measure success of monitoring points, 4) recommend new monitoring points, if appropriate, 5) develop draft Monitoring/Reporting Plan and Quality Assurance. The Monitoring system should not only monitor for existing pollutants but also provide information on new pollutants that could impact water quality.

"Watershed-based Program for Identifying and Managing Sources of Recreational Water Impairment" to be conducted in the SDRW, to consist of grab sampling at a number of fixed locations throughout the SDRW during wet and dry weather conditions. Results will be analyzed for total coliform, fecal coliform, and enterococcus, and plotted. Utilizing the combined resources of the County DEH, the San Diego State University (SDSU) Graduate School of Public Health, and the City of San Diego Water Department a baseline ambient assessment of indicator bacteria levels will be conducted through this project. The County DEH and SDSU will focus on monitoring downstream of the reservoirs and in coastal waters, and the San Diego Water Department will conduct the monitoring at the reservoirs and upstream of the reservoirs. The participation of watershed stakeholders will be solicited in designing and carrying out this monitoring program. State-certified environmental laboratories using already established Quality Control/Quality Assurance programs analyze samples for ambient bacterial levels. Results will be used in Phase 3 and 4 of the WMP development (see Table 3).

i. Citizen monitoring will be used through the San Diego Stream Team volunteers.
ii. AB411 Recreational Water Quality Monitoring at coastal sites with in the SDRW. Monitoring will be oriented toward ambient water and habitat quality. As well as, to determine the effectiveness of restoration or management measures. The SDST's baseline bioassessment data along with results of ongoing monitoring will provide information regarding the health of a stream, and tools with which to diagnose problems and perhaps establishes sources of problems.

6. SWRCB or RWQCB STAFF CONTACTED REGARDING THIS PROPOSAL:

RWQCB Contact:	Bruce Posthumus & ~~Cynthia Gorham-Test~~	SWRCB Contact:	Jean Ladyman & Ken Harris
Phone No.:	858-467-2964 & 858-467-4285	Phone No.:	916-341-5475 & 916-341-5500
Dates contacted:	9/7/00, 12/15/00, 1/25/01 & 1/2/01, 1/12/01, 1/17/01	Dates contacted:	Many calls re: general questions

7. COOPERATING AGENCIES:

Agency Name	Role/Contribution to Project	Contact Person	E-mail address	Phone No.
County of San Diego ◆ Environmental Health ◆ Flood Control	 Lead Hydrology, flooding issues	 Teresa Brownyard Tim Stanton	 Tbrowneh@co.san-diego.ca.us Tstantpw@co.san-diego.ca.us	 619-338-2203 858-694-3722
City of San Diego ◆ Water Department ◆ Stormwater Administrator	 Water supply reliability Jurisdictional partner	 Robert Collins Karen Henry	 Ewc@sddpc.snnet.gov Kgh@street.sannet.gov	 619-668-2084 619-525-8644
City of Santee	Jurisdictional partner	Cary Stewart	Cstewart@ci.santee.ca.us	619-258-4100
City of El Cajon	Jurisdictional partner	Dennis Davies	Ddavies@ci.el-cajon.ca.us	619-441-1661
City of La Mesa	Jurisdictional partner	Dris Elwardi	Delwardi@ci.la-mesa.ca.us	619-667-1152
San Diego County Water Authority	Water supply reliability	Paul Gerbert	Pgebert@sdcwa.org	619-682-4161
San Diego State University ◆ Department of Geology ◆ Institute for Regional Studies of the Californias	Technical experts GIS & visualization systems Watershed policy &planning	 Dr. Richard Wright Dr. Susan M. Michael, Ph.D.	 Wright@typhoon.sdsu.edu Smichel61@aol.com	 619-594-5466 619-449-4008
Ramona Municipal Water District	Water supply reliability	Kit Kesinger	Kkesi@sfketema.com	619-441-5489
The Environmental Trust, San Diego Stream Team	Technical expert in bioassement and monitoring	Neal Biggart	Nbiggart@tet.org	619-461-1833
Iron Mountain Conservancy	Technical expert riparian habitat	Kit Kesinger	Savewilds@aol.com	619-441-5489

Resolutions adopted (attached) in support of this proposal:

- City of El Cajon (Resolution No. 9-01, adopted January 23, 2001)
- City of Santee (Resolution No. 12-2001, adopted January 24, 2001)

Letters of supports (attached) for this proposal have been provided by:

- San Diego County Water Authority (SDCWA)
- City of San Diego Water Department (CSDWD)
- City of San Diego, Stormwater Administrator
- San Diego Stream Team
- The Environmental Trust
- SDSU, Department of Geology

Three SDRW planning meetings where held on January 3rd, 17th, & 26th to facilitate writing this proposal. Stakeholders strongly supported this effort and offered active assistance in preparing it. Participants at these meetings, and others who reviewed draft proposals, included Cary Stewart (City of Santee), Robert Zaino (City of Santee), Frank Boydston (City of Santee), Robert Collins (City of San Diego Water Dept.), Jeff Pasek ((City of San Diego Water Dept.), Mark Stone (City of San Diego Water Dept.), Dennis Davies (City of El Cajon), Paul Gerbert (San Diego County Water Authority), Jim Peugh (Friends of Famosa Slough & San Diego Audubon Society), Neal Biggart (Environmental Trust & San Diego Stream Team), Dr. Richard Wright (SDSU), Dr. Suzanne Michel (SDSU), Kit Kesinger (Iron Mountain Conservancy & Ramona Municipal Water District), George Wilkins (County Flood Control), Tracy Cline (County Planning), Teresa Brownyard (County Environmental Health), Jon VanRhyn (County Environmental Health), Mike Porter (County Environmental Health), Donald Steuer (County DCAOs Office), Cynthia Gorham-Test (SDRWQCB), Al

- 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.
- In 1998, Santee voters rejected development of the Fanita Ranch parcel to seek funding and consensus based development options to protect wetlands areas, improve water quality in the San Diego River and decrease habitat fragmentation.

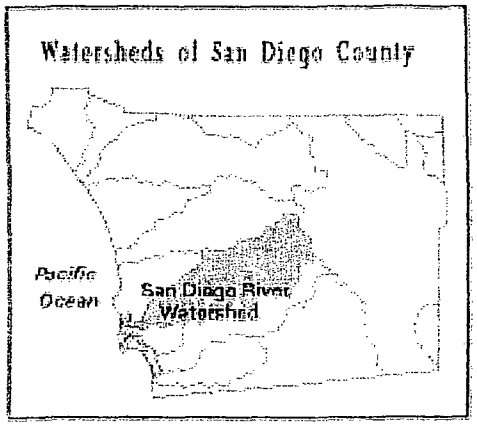
15. **DESCRIBE HOW THE PROJECT WILL RESULT IN ONGOING OR WIDESPREAD IMPLEMENTATION THROUGHOUT THE PROJECT AREA, REGION, OR STATE.** Several factors will help to ensure the ongoing implementation of this WMP after the requested Proposition 13 funds are expended. First, a major objective of the effort is to develop agency and stakeholder commitment to the funding and implementation of project recommendations and deliverables. It is not intended that the requested Proposition 13 monies will be used to fund specific implementation elements, but rather to establish a framework for the coordination of efforts. The project team and stakeholders are committed to continuing to identify and obtain additional funding to sustain this and other related efforts into the future. Second, the October 2000 initiation of Project Clean Water by the County of San Diego will provide a provide a forum for assembling the people, resources, and information necessary to cooperatively create a regional commitment to water quality management efforts. This complements and provides a context for the proposed project. More importantly, it leverages the resources available for project planning and implementation in this and other watersheds. Third, the commitment of the County of San Diego to manage the project will ensure the ongoing availability of the technical and regulatory staff resources that will be needed throughout the remaining development and implementation phases.. The collective experience and expertise contained within the County Departments of Environmental Health, Planning and Land Use, Public Works, and Parks and Recreation is extensive and will provide significant ongoing resources for the project. It is also anticipated that a revised Municipal Stormwater permit will be issued for the SDHR that requires the implementation of urban runoff management activities on a watershed basis. Although these requirements will apply only to stormwater runoff management, the development and application of these programs will require similar stakeholder input and implementation processes. This again will result in the availability of additional resources to support this project.

16. **DESCRIBE HOW THE PROJECT WILL DEMONSTRATE A CAPABILITY OF SUSTAINING WATER QUALITY BENEFITS FOR A PERIOD OF 20 YEARS AS REQUIRED BY PROP 13 (79080(d)(2)).** Once completed, this WMP will serve as an umbrella over existing and future projects and planning efforts in the SDRW. By providing a framework for increased coordination between efforts, which are currently initiated and conducted independently, our overall ability to address water quality issues will be significantly enhanced. In essence, this will provide the opportunity to institutionalize water quality issues as a component of all planning efforts within the SDRW, to provide a forum for their continued discussion, and to integrate the management of surface water, groundwater, habitat, and flooding issues into a common planning framework. While the long-term sustenance of water quality cannot be guaranteed through planning efforts alone, the likelihood of achieving this end increases proportionally to the degree of communication and coordination between participants. The execution of a MOU and the planned establishment of a WAC which includes elected officials, stakeholders, governmental agency officials, and technical advisors likewise supports this objective by providing a strong commitment and foundation for change. Additionally, the WMP will have a menu of options from which to select to carry out the actions necessary to reach plan goals and objectives. It is anticipated that the actions identified in the plan will occur over time and that monitoring will continue at the coast as required by AB411. Three technical workshops will be conducted which will provide a forum for public involvement in the planning process that is vital in ensuring success.

17. **IF THERE IS AN NPDES PERMIT REQUIRED FOR THIS PROJECT AREA (CHECK WITH YOUR RWQCB), DESCRIBE THE RELATIONSHIP OF THE PROJECT TO THE PERMIT.** There are three NPDES general stormwater permits applicable to the project area; (1) municipal, (2) industrial, and (3) construction. The municipal permit requires that copermittees identify and implement BMPs to reduce or eliminate contaminants in urban runoff to the maximum extent practicable. The proposed planning effort is not required by, but complements, the objectives of this permit. There are seven additional NPDES permits in the San Diego HU (one major and six minor). The relevance of these, as well as the industrial and construction permits, to the proposed project is minor, but they will be considered in the development of the WMP. Additionally, the development of a future TMDL for coliform bacteria in the SDRW is scheduled for completion by 2006. The attainment of water quality standards will likely involve both watershed management planning and the enforcement of increased requirements under municipal stormwater NPDES permits. These efforts will require greater coordination in the future.

18. **FOR PROP 13 PROJECTS, IDENTIFY THE NPS MANAGEMENT MEASURE(S) THAT THE PROPOSED PROJECT WILL IMPLEMENT AND DESCRIBE HOW YOU WILL BE ABLE TO TRACK OR ACCOUNT FOR THE IMPLEMENTATION OF THESE MEASURES.** As described in section 5.b., we propose to implement applicable management measures to address following priority areas of concern: 1) urban, 2) wetland, riparian, and vegetated treatment systems, and 3) hydromodification. Specific management measures to address urban sources of NPS pollution include; 1) erosion/sediment and chemical control on construction sites, 2) controls for new and operating on-site disposal systems, 3) requirements for planning, siting, and developing

San Diego River Watershed



Boulder Creek Unit

Cuyamaca Reservoir

San Vicente Unit

San Vicente Reservoir

El Capitan Unit

El Capitan Reservoir

Jennings Reservoir

Alpine

Lower San Diego Unit

Murray Reservoir

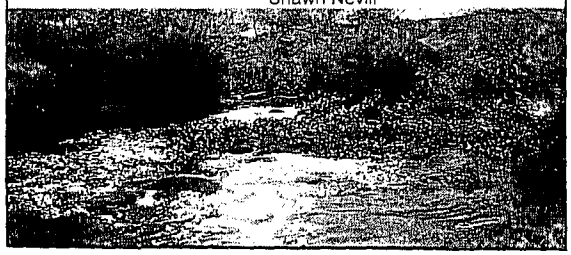
San Diego

CESAR

Department of Geography
San Diego State University

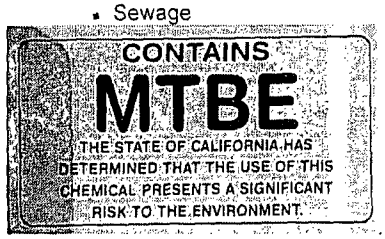
Pollution In The San Diego River

Moses Cohen
Casey Engelhardt
Shawn Nevill



Pollutants

- Petroleum
- Sewage



The San Diego River

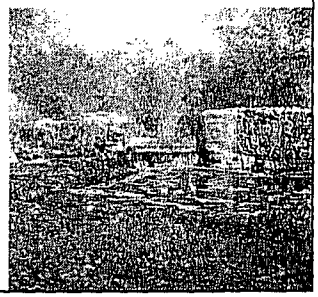
- Over 2,000 years of history
- Populated by Kumeyaay Indians

Pollutants

- Solid Waste (Trash)
- Urban Runoff

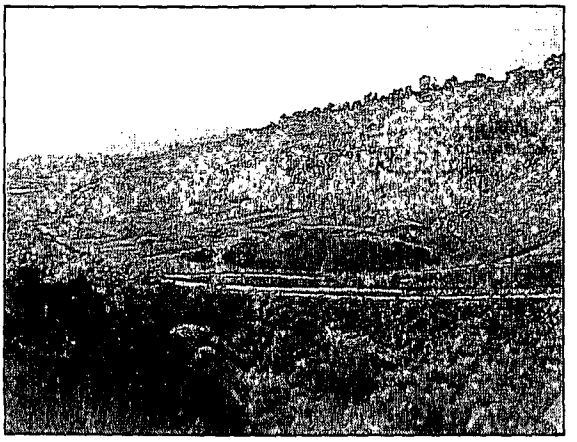
European Settlement

- Mission San Diego 1700s
- Damned for Agricultural Use



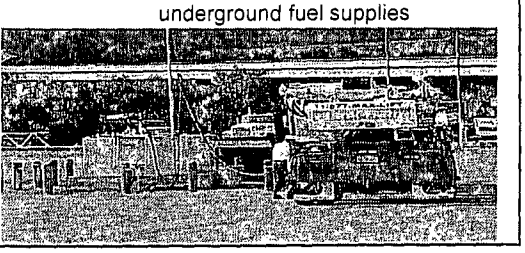
Wildlife Damage

- Endangered species: Arroyo Toad, Bell's Vireo, Calif. Gnat Catcher, Southwestern Pond Turtle
- Habitat Destruction



MTBE Contamination

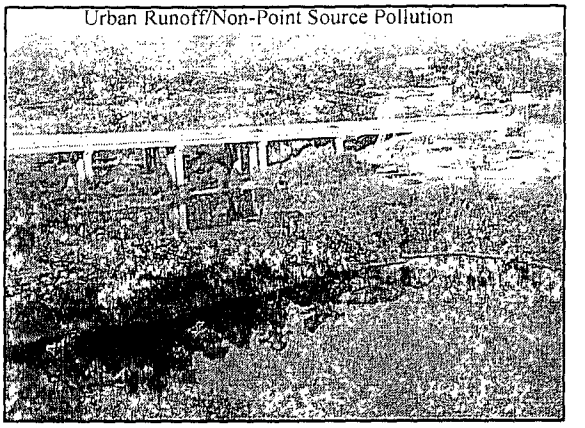
- Phase out of MTBE use
- Lacking regulations of leaking underground fuel supplies



Effects Of Pollution

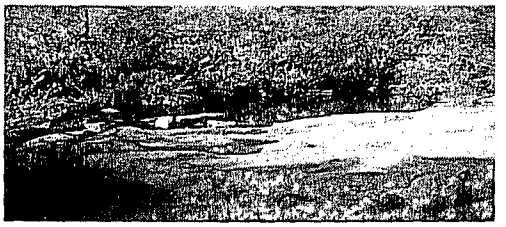
- Definition of Bioaccumulation
- Fertilizers, Petroleum, Solid Waste, Heavy Metals, Bacteria
- Contaminated Sediment

Urban Runoff/Non-Point Source Pollution

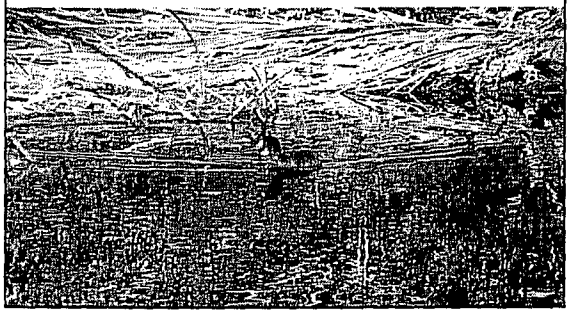


Sewage Contamination

- Faulty sewer lines
- Poor Detection System



Public Education & Awareness



From: Bruce Posthumus
To: Alan Monji
Date: 7/12/01 2:32PM
Subject: Re: Prop 13 status on San Diego River

Alan -

On the ranked list adopted by the SWRCB, the SD River WMP proposal was ranked above the funding cutoff, so it will be funded.

Also see attached EO report for the June 13 RB meeting.

>>> Alan Monji 07/12/01 11:42AM >>>
Bruce

Can you tell me the status of San Diego River Watershed Management Plan proposed by Teresa Brownyard at the County of San Diego. I am reviewing the San Diego River for the 303d list and want to know if this project has received Regional and State approval.

Thanks

Alan

SWRCB Approval of Proposition 13 Grant Proposal Priority Lists *(Bruce Posthumus)*

At its meeting on May 17, 2001, the SWRCB approved the ranked priority lists of proposals submitted for funding in the first round of the Proposition 13 competitive grant programs administered by the SWRCB. Statewide, a total of 374 eligible proposals requesting a total of $222 million were received. A total of $21.8 million was available on a competitive basis for three programs. Based on the approved lists and the funding available, grants will be awarded to the following San Diego region projects.

WATERSHED PROTECTION PROGRAM				
#	PROJECT	APPLICANT	GRANT AMOUNT	HYDROLOGIC UNIT
1	Regional Wetlands & Watershed Management Plan for Coastal Southern California	Environment Now	$607,500	All (& regions 3, 4 & 8)
2	Santa Margarita River Watershed Management Plan	San Diego County Flood Control District	$200,000	Santa Margarita
3	Los Peñasquitos Master Watershed Plan	City of San Diego	$200,000	Peñasquitos
4	San Diego River Watershed Management Plan	County of San Diego Department of Environmental Health	$197,500	San Diego
5	Otay River Watershed Management Plan	County of San Diego	$200,000	Otay
6	Tijuana River Watershed Management Plan	San Diego County Flood Control District	$200,000	Tijuana
			TOTAL: $1,605,000	

NONPOINT SOURCE POLLUTION CONTROL PROGRAM				
#	PROJECT	APPLICANT	GRANT AMOUNT	HYDROLOGIC UNIT
1	Dairy Fork Biofiltration Basin in Aliso Creek	County of Orange Public Facilities and Resources Department	$215,000	San Juan
2	Munger Storm Drain Filtration	County of Orange Public Facilities and Resources Department	$204,500	San Juan
3	Los Peñasquitos Sediment Retention Project	Los Peñasquitos Lagoon Foundation	$960,441	Peñasquitos
			TOTAL: $1,379,941	

COASTAL NONPOINT SOURCE CONTROL PROGRAM				
#	PROJECT	APPLICANT	GRANT AMOUNT	HYDROLOGIC UNIT
1	Wetland Capture and Treatment Network	City of Laguna Niguel	$153,750	San Juan
2	Reduction of Agricultural Nonpoint Source Pollution in the Coastal Watersheds of Region 9	University of California Cooperative Extension	$300,000	San Juan, Santa Margarita, San Luis Rey, Carlsbad & Tijuana
			TOTAL: $453,750	

BROWN AND CALDWELL

SoCal Water Resources News

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Need for S.D. River restoration work is agreed on

Lawmakers and activists meet here

San Diego Union-Tribune - 8/1/01
By Steve La Rue, staff writer

The San Diego River, which meanders 52 miles from Cleveland National Forest to the coast, is a waterway that needs more respect, community activists told state lawmakers yesterday.

They spoke at the inaugural meeting of the California Assembly's Select Committee on Park and River Restoration, convened at Mission Trails Regional Park.

One priority emerged -- the need for a plan to coordinate restoration, cleanup and weed-removal efforts.

"I think we need to get to the place where we can sit down and say this is where we are now, this is where we have to go, and it is going to cost this much money," said committee Chairwoman Christine Kehoe, D-San Diego.

Mike Kelly, a leader of the Friends of Mission Valley San Diego River Park Foundation, and other activists agreed.

"After years of cattle grazing, dams and industrial uses, we have some very degraded lands that desperately need restoration," he said, referring to riverbanks.

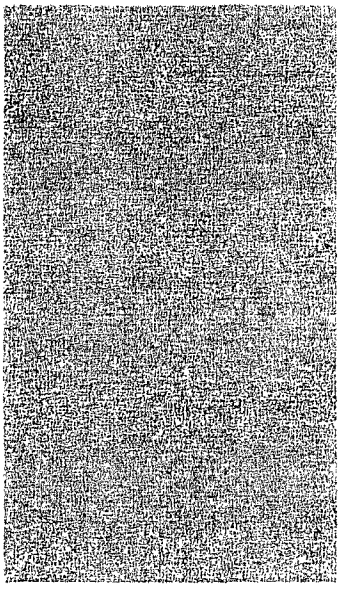
Restoration projects include eradicating the exotic weeds that clog the river and rob native plants of water and sunlight. But funding such projects should wait until an overall plan for the river is completed, Kelly said.

The city of San Diego is expected to spend about $430,000 on a master plan for its 11.5 miles of river and undertake several restoration projects.

"The San Diego River has been very important culturally to the region and is also has great bio-resources," said Tom Story, an environmental adviser to mayor Dick Murphy.

Story said the mayor is enthusiastic about creating a coordinated program of river restoration.

Michael Beck, San Diego representative of the Endangered Habitats League, described some river areas in Lakeside as "trashed out." He suggested that an umbrella organization of community and other groups coordinate and manage restoration projects.



The San Diego Chapter of the Sierra Club wants federal protection under the Wild and Scenic Rivers program for more than 12,000 acres of wild lands surrounding eight miles of the river at its far eastern end, as well as six miles of Cedar Creek, a tributary.

"We have realized that, while contamination is manifest on the coast, it can be traced upstream to areas where it originates," said Assemblyman Howard Wayne, D-San Diego, who represents coastal areas.

Charlene Zettel, R-Poway, who also sits on the panel, said, "Two-thirds of my Assembly district provides the headwaters of the San Diego River, and I have a strong interest."