

**ADDRESSING THE NEED TO PROTECT CALIFORNIA'S
WATERSHEDS: WORKING WITH LOCAL PARTNERSHIPS**

REPORT TO THE LEGISLATURE
(as required by AB 2117, Chapter 735, Statutes of 2000)

California Resources Agency
State Water Resources Control Board

DRAFT **September 17, 2002**

MESSAGES FROM THE GOVERNOR, THE SECRETARY FOR RESOURCES AND THE CHAIR OF THE STATE WATER RESOURCES CONTROL BOARD

Governor Gray Davis: *“My administration has made the protection of the State’s watersheds a top priority. This important study will help to achieve that goal by promoting efforts at the local level to manage and restore our watersheds. The result will help protect and preserve our natural resources, improve water quality and leave a priceless legacy for the future.”*

Secretary for Resources, Mary D. Nichols: *“Is ‘watershed’ a ‘dividing point,’ as a dictionary defines it, or is it a ‘gathering place?’ Watersheds have a wonderful ability to bring people together, even those once in conflict. Watersheds help find what unites rather than what divides a community. They also bring out creativity and innovation by bringing together many viewpoints through the collaborative process. This study will help to outline the future roles of state agencies in creating a comprehensive assistance program for local watershed efforts. By following the recommendations in this report, the state is assured of developing a true partnership with local efforts for the first time. These watershed partnerships are a vital link in fulfilling the state’s responsibilities for natural resource stewardship. This kind of a movement is too good to ignore!”*

State Water Resources Control Board Chair, Arthur Baggett: *“We are fortunate to live and work in one of the most diverse and beautiful ecosystems on Earth. California’s watersheds are the foundation of this system. All of us have the responsibility to protect, preserve, and restore these watersheds for the benefit of those that live here, the millions of visitors that recreate here, the migratory birds that rest in our waters, the farms that supply our food, and the generations yet to come. This report is the beginning of a process to set aside differences and do just that.”*

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SideBars

Sidebar: Humboldt Bay Watershed Advisory Committee through their Monitoring Advisory Committee has brought together representatives from various state, federal and local groups to create a comprehensive monitoring plan for trends in turbidity and suspended sediment levels in the 200 square mile watershed.

Sidebar: Clear Lake Basin Watershed Management Project has increased clarity of Clear Lake by 2.5 feet over the last ten years due to the collaborative partnerships and projects supported by the establishment of the county's 42 member resource management committee.

Sidebar: The Lagunitas Creek Technical Advisory Committee has installed 30 large woody debris structures, scattered through 3.5 miles of the creek to enhance instream habitat for salmonids and shrimp and has constructed 11 erosion control projects in the Lagunitas and San Geronimo Creek watersheds.

Sidebar: Santa Clara Basin Watershed Management Initiative through partnership efforts with IBM, Komag, Akashic and Tyco reduced industrial copper loading in the South Bay by 37 % and industrial nickel loading by 42 % in four years. They are working with the RWQCB to remove the South Bay from the Impaired Waterbodies list.

Sidebar: Elkhorn Slough Watershed Permit Coordination Program: Encouraged by this Straightforward approach, landowners participating in this program have implemented more than 30 projects - reducing sediment into the Elkhorn Slough by more than 33,000 tons.

Sidebar: Santa Ana River Watershed Program -This program has created 400 acres of riparian habitat by removing 600 acres of impenetrable weeds. This new habitat has increased the population of Least Bell's Vireo from a dozen pairs in 1980 to 336 pairs in the spring of 2001.

Sidebar: Los Peñasquitos Lagoon Foundation has successfully maintained an open lagoon mouth for the past 10 years using effective opening techniques to minimize natural mouth closures and to maximize the potential of natural systems to reopen the lagoon mouth before water quality is severely impacted.

I. EXECUTIVE SUMMARY

California's rivers, lakes, and estuaries provide a host of public benefits, including commercial and sport fishing, drinking water supplies, recreation, and scenic values. Increasingly, our public agencies face challenges in managing these public trust resources in ways that protect them and allow for other important public uses. Challenges include: managing polluted storm water in urban centers, managing floods, restoring native salmon stocks and other threatened species, reducing toxicity from pesticides, reducing sediment impacts from working forestlands, managing hydropower plants, and protecting the quality and supply of drinking water.

Many of these responsibilities can only be met by examining the entire watershed – or drainage basin – of a river, including the way that lands are managed and how they affect the receiving water. Traditionally, each of these challenges is addressed through separate programs, agencies, and responsibilities that are designed to meet state objectives rather than be tailored to the science and community of each watershed.

Increasingly, in response to overlapping authorities and the challenges of protecting and restoring impaired waters, watershed partnerships have formed. These partnerships are not usually designed or instigated by government agencies, but they evolve as a result of local leadership – landowners, county officials, water districts, local environmental interests, resource conservation districts, educators, and the general public - to improve environmental conditions and to manage natural resources more effectively on a watershed scale. Depending on exact definitions, there are approximately 200 to 325 of these watershed partnerships operating in California today.

Connecting people to their environment can be a challenge. Connecting across agency programs or across professions can also be a challenge. Watersheds offer a useful geographic unit to better make these connections. Watershed management integrates many issues since it represents the protection, use, restoration, and enhancement of landscapes, water quality, water quantity, ecosystems, estuaries, and floodplains.

In November of 2000, State Secretary for Resources, Mary D. Nichols, and Chair of the State Water Resources Control Board, Art Baggett, began a study of watershed partnerships in California. The two agencies hired an expert consultant in watershed management, Dr. Sari Sommarstrom, to assist them in evaluating ten case studies of watershed partnerships. In August of 2001, Secretary Nichols and Chair Baggett formed the Joint Task Force on California Watershed Management, an interagency and stakeholder effort, to discuss the results of the ten case studies, to refine the findings, and to craft major recommendations to move the State in a new direction to protect and restore watersheds, lakes, rivers and estuaries in California. This report is the culmination of that study. The study was required by legislation signed by

Governor Davis in September 2000 (AB 2117(Wayne), Chapter 735, Statutes of 2000).

The purpose of this report is: to evaluate how effective voluntary, community-based, collaborative watershed efforts or partnerships are in contributing to the protection and enhancement of California's natural resources, and what the State can do to assist them.

Two state agencies and their constituent departments play a lead role in watershed management in California. They are the **State Water Resources Control Board** (SWRCB) and its Regional Water Quality Control Boards (RWQCB) (under the **California Environmental Protection Agency** [Cal/EPA]) and the **California Resources Agency** (RA) and its departments, including **the Department of Fish and Game (DFG), the Department of Water Resources (DWR), the Department of Forestry and Fire Protection (CDF), the Department of Conservation (DOC), the Department of Parks and Recreation (DPR).**

The legislation required the Resources Agency and the State Water Resources Control Board to evaluate three watershed partnerships. This study evaluates ten watershed partnerships to better represent the diverse watershed-wide efforts in California and as a basis for making statewide findings and recommendations. These partnerships are: the Humboldt Bay Watershed Advisory Committee, the Yuba Watershed Council, the Clear Lake Basin Watershed Management Project, the Tomales Bay Watershed Council and the Lagunitas Creek Technical Advisory Committee, the Codornices Creek Watershed Restoration Action Plan, the Santa Clara Basin Watershed Management Initiative, the Elkhorn Slough Watershed Permit Coordination Program, the Arroyo Seco Watershed Restoration Feasibility Study, the Santa Ana River Watershed Group and Program, the Los Peñasquitos Lagoon Enhancement Program. The ten case studies were chosen to represent the diverse watershed wide efforts found in different geographic areas of California.

RA and SWRCB formed a multi-stakeholder task force, the Joint Task Force on California Watershed Management, and RA formed an Interagency Advisory Team to assist them in analyzing the results of these case studies and forming recommendations. Selected findings and recommendations are presented below.

Findings

- ***Watershed management is a very valuable and holistic approach to meeting comprehensive resource management objectives.*** The State of California is responsible for the protection and management of its wealth of natural resources.
- ***The State cannot accomplish its natural resource responsibilities or protect and restore its watersheds alone.*** Working in partnership with diverse interests at the local level is a better way for the State to implement its programs
- ***The State has multiple programs for land, water, wildlife, coastal, agricultural, forest, and park resources that have evolved from diverse legislative mandates and citizen-based ballot initiatives.***

These programs are not well coordinated for the most part, but local watershed-scale collaboration can significantly help.

- **Measurable watershed improvements – on the ground and in the water - are achievable by voluntary, collaborative efforts.** Time is usually needed – at least 4-5 years – to show demonstrable improvements in the watershed, which can be measured by changes in environmental conditions.
- **Lack of appropriate monitoring assistance, in the form of staff time and funding, impedes everyone’s ability to measure their programs’ effectiveness.**
- **Funding for organizational support (including watershed coordinators), outreach, watershed assessments, watershed plans, and monitoring is difficult to obtain.** Financial uncertainty and cash flow crises impede groups from strongly sustaining the longer-term effort needed to implement and evaluate their common watershed strategy.
- **Absence of useful watershed assessments and plans can result in restoration projects that don’t address priority problems and their causes.** Projects may be scattered and not focused on achieving watershed management objectives, and don’t use grant funding efficiently.
- **Lack of coordination among state agencies impedes:** the effectiveness of multiple grants working together, the delivery of appropriate and much-needed technical assistance, development of watershed assessments and plans useful for all interests, and the implementation and analysis of effective monitoring programs.

Recommendations

The following recommendations describe specific assistance that the State should provide:

Adopt Statewide Watershed Policy

- Adopt a formal policy that it is in the State’s interest to endorse local, collaborative watershed partnerships.
- State agencies involved in watershed management should evaluate and implement opportunities to reconfigure their programs and organizations using watershed management as an organizing principle for more efficient and effective delivery of existing programs.
- Establish a single set of overall principles, policies and flexible guidelines for watershed management.
- Promote participation by local governments (e.g., Cities and Counties) and special districts (e.g., RCDs, sewage, water, irrigation, fire districts) who are essential to implementation of watershed protection.

Develop a Strategic Plan

- Develop a “Strategic Plan for Watershed Management” under the direction of RA and SWRCB.

Improve Technical Assistance and Communication

- Develop manuals that define minimum levels of science needed for acceptable watershed assessments, watershed plans, and monitoring activities.
- Make it a priority to participate in and provide technical assistance for watershed management partnerships.
- Directly support regional or sub-regional forums for multiple watershed efforts or large scale basin efforts in order to effectively communicate and encourage larger scale planning.
- Provide easy public access to watershed programs in the various departments.
- Establish or co-sponsor core training courses for watershed partnerships in which department personnel and/or non-governmental organizations provide the instruction.
- Coordinate regional workshops on available watershed management grant programs as frequently as annually for potential grant applicants that are tailored to each region.

Clarify Link to Regulations

- Proactively coordinate state regulatory processes (e.g., TMDLs) and schedules in watersheds where local voluntary partnerships are underway.

Leverage Multiple Funding Sources and Consider Long-term Funding

- Encourage partnerships to seek and leverage diverse funding sources (i.e., federal, local, private) and not depend solely on state grants for funding.
- Consider providing State support to local watershed partnership efforts for a sufficient period of time to allow success.
- Consider addressing the two largely unfunded areas in watershed management: operational support and monitoring. Further coordinate delivery of state programs to accomplish goals specified in this report.

Ensure Watershed Partnerships have access to science and monitoring

- Support applied scientific and technical studies by watershed areas to improve understanding of watershed function and restoration processes (i.e., hydrology and geology studies).

Ensure Public Accountability

- Provide accountability measures for recipients of current or future State funding for local watershed efforts.
- Available funding should be awarded to voluntary watershed restoration and enhancement projects that use principles and guidelines or watershed assessments developed by the State where these are available.

II. PURPOSE & BACKGROUND

In November of 2000, State Secretary for Resources, Mary D. Nichols, and Chair of the State Water Resources Control Board, Art Baggett, began a study of watershed partnerships in California. The two agencies hired an expert consultant in watershed management, Dr. Sari Sommarstrom, to assist them in evaluating ten case studies of watershed partnerships. In August of 2001, Secretary Nichols and Chair Baggett formed the Joint Task Force on California Watershed Management, an interagency and stakeholder effort, to discuss the results of the ten case studies, to refine the findings, and to craft major recommendations to move the State in a new direction to protect and restore watersheds, lakes, rivers, and estuaries in California. This report is the culmination of that study. The study was required by legislation signed by Governor Davis in September 2000 (AB 2117 (Wayne), Chapter 735, Statutes of 2000).

WHAT IS WATERSHED MANAGEMENT?

“We’re proud of doing something that others said couldn’t be done!”

-Elkhorn Slough Watershed Permit Coordination Program

Over the past century, a multiple agency approach to natural resource and environmental management has evolved. Working at the local level with individuals and communities reflects the State’s interest in empowering its citizens to help achieve the State’s resource management and environmental objectives. Connecting people to their environment can be a challenge. Connecting across agency programs or across professions can also be a challenge. Watersheds – or drainage basins - offer a useful geographic unit to better make these connections. Watershed management integrates many issues through the protection, use, restoration, and enhancement of water quality, water quantity, ecosystems, estuaries, managing hydropower plants, and floodplains.

The purpose of this report is to evaluate the effectiveness and value of voluntary, community based, and collaborative watershed partnerships in contributing to the protection and enhancement of California’s natural resources and environment. In addition, this report identifies specific areas in which the State can help watershed partnerships succeed.

WHAT IS A WATERSHED PARTNERSHIP?

Watershed partnerships represent a relatively new method of watershed management. Instead of each agency, organization, or individual working separately, a wide array of stakeholders decide to work cooperatively at the watershed scale toward improved

environmental conditions. Watershed partnerships are based on the assumption that longer-lasting improvements result from decentralized, community-based, collaborative decisions made by those most interested or most affected by the outcome of the decision. These voluntary partnerships complement the existing regulatory framework of local, state, and federal agencies and are not intended as a replacement for any regulatory program.

Identifying the rapidly expanding number of watershed partnerships in California is not easy. Since most partnerships are self-defined, it can be difficult to determine from any lists by name-only how homogenous or diverse they are in their 'partnering.' These collaborative efforts can be called committees, councils, advisory groups, initiatives, programs, or a dozen other names. Assuming that "watershed partnerships" involve a diverse assemblage of representatives of agencies (local, state, federal), landowners, environmentalists, and other interest groups having a stake in that geographic area, recent estimates range between 200 and 325 partnership efforts are currently active in California. Diversity in approach, as well as membership, also characterizes these efforts.

The maps contained in appendix F depict some of the watershed partnerships operating in California at this time.

Joint Task Force on California Watershed Management and Interagency Team

Two working groups were created to provide advice to RA and SWRCB as they implemented AB 2117. The Joint Task Force for California Watershed Management consists of members from public and private entities that have a stake in California's watershed issues. A State Interagency Watershed Team was also formed to identify key department staff in each watershed and to determine mechanisms for improved coordination with watershed partnerships. Both groups met a total of five times each to discuss the findings and recommendations of this study. These two teams also contributed their own findings (see appendix C).

III. EXISTING WATERSHED MANAGEMENT EFFORTS IN CALIFORNIA

As part of this study, the Interagency Team reviewed and assessed existing watershed management programs and mandates. These programs and mandates are summarized in this section.

STATE WATER RESOURCES CONTROL BOARD (SWRCB)

SWRCB has many programs that contribute directly or indirectly to watershed management. Its Watershed Management Initiative (WMI) provides funding for one

statewide watershed coordinator and for one regional watershed coordinator in each of the nine Regional Water Quality Control Boards (RWQCB). Local stewardship and partnerships among governmental agencies and private interests are vital parts of the watershed management process envisioned by the WMI. Involvement of stakeholders throughout a watershed is a critical feature of watershed management that will provide for sustained, long term improvements in water quality. The WMI is not considered a program at SWRCB instead it is an effort to coordinate the activities of other SWRCB Programs on a watershed basis. The major SWRCB programs affecting watershed management are described below.

Nonpoint Source Program (NPS)

The NPS program was developed to reduce water quality impacts from nonpoint sources of pollution also called polluted runoff. SWRCB administers federal Clean Water Act (CWA) funding (section 319) provided by the U.S. Environmental Protection Agency (U.S. EPA) for the NPS program. Currently half of the 319 funds go to support SWRCB and RWQCB staff and the other half goes to fund local watershed projects selected on a competitive basis. This funding partially supports the State's water quality agencies (SWRCB and RWQCBs) and coastal resources agency (California Coastal Commission) in implementing water quality NPS activities identified in the *Plan for California's Nonpoint Source Pollution Control Program*. Funding is provided to local agencies, resource conservation districts, and non-profit organizations for NPS implementation projects to reduce, eliminate, or prevent water pollution and to enhance water quality. Through the grant program, SWRCB, RWQCBs, and U.S. EPA encourage watershed management as a means to protect high quality waters, to maximize the use of limited resources and to develop partnerships among all stakeholders of a watershed to address water quality issues, in particular those that relate to TMDL designations.

Regulatory Programs and Total Maximum Daily Loads (TMDLs)

SWRCB also has regulatory responsibilities for point sources of pollution through the National Pollutant Discharge Elimination System (NPDES) Program. This Program extracts fees, requires monitoring, and issues permits for all point sources of discharge to surface waters in the State. The NPDES Program uses a technology-based approach that requires development of performance standards for pollution control technology for point source discharges. This approach was the great innovation of the 1972 CWA.

Another strategy is a water quality-based approach that relies on evaluating the condition of surface waters and setting limitations on the amount of a pollutant the water can assimilate without violating water quality standards. This approach applies to both point and nonpoint discharges. Section 303(d) of the CWA bridges these strategies. Section 303(d) requires that the states produce a list of waters that are not attaining standards after the technology-based limits are put into place. For those waters included in the section 303(d) list and where the U.S. EPA administrator deems appropriate, the states are required to develop TMDLs. A TMDL must account for all

sources of a pollutant that caused the water to be listed. Federal regulations implementing section 303(d) require that the TMDL, at a minimum, account for contributions from point sources and nonpoint sources, such as polluted runoff.

U.S. EPA is required to review and approve the list of impaired waters and each TMDL developed by the states. If U.S. EPA disapproves a list or a TMDL, it is required to establish one for the State.

Proposition 13 Water Bond

SWRCB administers several programs under Proposition 13 (Costa-Machado Water Act of 2000). Three of these programs will provide competitive grant funding to local groups for pollution control activities between 2000 and 2006. These three programs are the Watershed Protection Program (\$90 million), the Nonpoint Source Pollution Control Program (\$100 million), and the Coastal Nonpoint Source Control Program (\$90 million). About \$40 million of these funds have been allocated since 2000. SWRCB also administers water bond funds under Proposition 13 for the following programs: Southern California Integrated Watershed Program; Lake Elsinore and San Jacinto Watershed Program; State Revolving Fund; Small Community Grant Program; Wastewater Construction Grants; Water Recycling Program; and the Seawater Intrusion Control Program.

Other Programs

The Surface Water Ambient Monitoring Program (SWAMP) conducts statewide surface water monitoring. This and other monitoring programs provide data to support the water quality protection programs. In conjunction with the Regional Boards, SWRCB participates in basin and statewide planning that sets the water quality standards for all waterbodies in the State including impaired waterbodies on the CWA section 303(d) list.

CALIFORNIA RESOURCES AGENCY (RA)

RA's role in watershed management is as a policy setter and crosscutting program initiator. Through the Agency's departments, watershed management concepts are incorporated into their management, funding, and regulatory programs. These programs range from restoration grant programs (such as DWR's urban streams program and DFG's salmon and steelhead restoration program), to landform restoration and road removals by the DPR, to support for Resource Conservation Districts through the DOC, to regulatory programs such as watershed rules as part of timber harvest planning through CDF. RA sees watershed management as a primary tool for coordinating resource management activities across a wide range of department missions and activities. Following is a description of these programs.

DEPARTMENT OF WATER RESOURCES (DWR)

DWR has a long-standing history for considering overall watershed effects while exercising its water management responsibilities. Involvement is strongest in areas with state water project delivery systems or state water master responsibilities. DWR is the co-lead (with SWRCB) of the CalFed Watershed Program and leads urban watershed restoration projects through their Urban Streams Program, which is frequently cited as a model program by watershed practitioners. DWR also leads watersheds efforts related to flood management and dams and diversions. DWR is in the process of reorganizing many of its program functions along watershed boundaries. DWR is currently very involved in watershed management efforts in the San Joaquin and Yuba watersheds.

DEPARTMENT OF PARKS AND RECREATION (DPR)

DPR is responsible for the management and operation of a diverse system of historic, natural and developed recreational lands for present and future generations. Natural resource programs include watershed restoration such as: road removals, stream rehabilitation, fish passage barrier removals, exotic plant species removal, prescribed fire, wetlands restoration, and management. There are also programs for land acquisition, inventory and monitoring of natural resources and environmental conditions, management actions to encourage perpetuation of threatened and endangered plant and animal species, and maintenance activities to monitor effectiveness of management actions. Watershed restoration and management activities are conducted both from headquarters and field offices, and are supported by general fund, bond, and grant monies. DPR is particularly involved in watershed restoration activities in Sinkyone Wilderness State Park, Bull Creek watershed (South Fork Eel River) and the Tahoe basin, in addition to numerous small coastal streams. Collaborations are underway with many local watershed groups and other large land owners in the Yuba River, Russian River, Malibu Creek, Navarro River and Morro Bay areas, just to name a few.

DEPARTMENT OF FISH AND GAME (DFG)

DFG has many responsibilities for public trust resource management that it exercises along watershed boundaries. DFG contains “basin planner” positions that work with landowners on a basin scale to assess, plan and implement restoration projects. DFG administers state and federal grant funds for salmon and steelhead restoration, and operates a “watershed academy” that trains technical staff from many departments in watershed process and function. DFG contains a hatchery program and monitors fish populations for fisheries management purposes. Through the Wildlife Conservation Board and Inland division, DFG administers land acquisition, easement and tax credit programs that are used in more comprehensive watershed planning efforts to preserve prime watershed lands. DFG also reviews Federal Energy Regulatory Commission (FERC) licenses and has authority in water rights proceedings to preserve flows necessary for fish. DFG’s field office management structure provides for maximum recognition and integration of community-based efforts at the field level.

DEPARTMENT OF CONSERVATION (DOC)

DOC is responsible for the Resource Conservation District Assistance Program for California's 103 resource conservation districts (RCDs). The Division of Land Resource Protection staff provides technical assistance, training and permit assistance to RCD boards. DOC administers the Watershed Coordinator Grant Program that provided \$2 million dollars to over 30 watershed coordinators to RCDs throughout California. As of December 15, 2001, coordinators have successfully obtained an additional \$13.4 million in grants for watershed activities. (The funding for this grant program is due to expire on June 30, 2002.) Scientific information on natural geologic processes is critical to ensure successful watershed restoration projects and land use planning decisions. DOC's Division of Mines and Geology (DMG) provides technical advice, scientific reports, and maps on the potential impacts from landslides, stream channel features, and sediment on both a watershed-wide basis and individual restoration projects.

CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION (CDF)

CDF has protection, regulatory, and technical assistance roles in watershed management. CDF is responsible for fire protection on over 31 million acres of private lands in California's watersheds. As the lead agency for timber harvesting plan approval, CDF is responsible for considering cumulative watershed effects prior to approving timber harvest plans. Through CDF's Fire and Resource Assessment Program (FRAP) unit, CDF provides forest ecosystem and watershed modeling and Geographic Information Systems (GIS) analysis that are used by many agencies, landowners, and community organizations. Also, CDF provides leadership in many watersheds where fuel loading and forest health are major threats to water quality through fire planning, technical assistance, and cost sharing on controlled burning and thinning projects.

Interagency Programs

Several state-federal interagency watershed efforts transcend the isolated department responsibility model and provide for lively collaboration including the California Biodiversity Council's Watershed Workgroup, the CalFed Watershed Program, and the North Coast Watershed Assessment Program.

California Biodiversity Council's Watershed Work Group

The California Biodiversity Council's Watershed Work Group, formed in 1999, is a mix of state, federal and local watershed practitioners that meet periodically to discuss watershed management issues statewide. They have produced two products: 1) a statewide watershed management 'General Principles' about the local watershed approach, and 2) the 'Best Funding Practices for Watershed Management' white paper of recommendations to improve state funding delivery to grant recipients. Currently, this group is working in small teams to help create or advise on a suite of watershed planning tools. These tools will be in the form of planning, assessment and implementation manuals, project and funding databases, and technical assistance teams.

CalFed Watershed Program

The CalFed Watershed Program's initial priorities are to build community capacity, to assist with watershed assessments and plans, and to implement watershed maintenance and restoration activities in the CalFed Solution Area. These commitments are outlined in the CalFed Record of Decision. An interagency MOU for the Watershed Program defining the structure and function of the Watershed Program has been prepared and circulated. Over 20 state and federal agencies are expected to sign it, to be followed by a more detailed Implementation Plan. The CalFed Watershed Program seeks advice from its Watershed Work Group, a formal subcommittee of the Bay Delta Public Advisory Committee that meets monthly and makes recommendations on policy issues related to funding and program elements. An Interagency Watershed Advisory Team of signatory agencies also is integral to the Program.

North Coast Watershed Assessment Program

The North Coast Watershed Assessment Program is an interagency program developed to assess watershed conditions for over six million acres of private lands on the North Coast over a seven-year period. Participants include the DFG, CDF, DWR, and DOC's DMG in the Resources Agency, and the North Coast Regional Water Quality Control Board from Cal/EPA. The goals are: 1) to provide consistent baseline information for evaluating the effectiveness of watershed protection programs over time; 2) to guide restoration programs; 3) to guide cooperative multi-stakeholder stewardship efforts; and 4) to help landowners and agencies implement laws requiring watershed assessments. The assessment field teams work with the public, landowners, and

watershed groups to scope out issues, identify and share information, collect new data where access is granted, and review and revise products.

NON-GOVERNMENTAL EFFORTS

A wide range of non-governmental voluntary watershed efforts are ongoing in California, ranging from individual to multi-stakeholder, short-term to long-term, privately-funded to publicly-funded. All contribute to the improved management of California's watersheds. Private landowners as well as environmental nonprofit groups receive state funding to accomplish restoration projects. Over 700 organizations claim to be involved in some type of watershed effort (Information Center for the Environment (ICE), UC Davis, Natural Resource Projects Inventory (NRPI) database <http://ice.ucdavis.edu/nrpi/>).

To help connect local efforts with state and federal agencies, the nonprofit educational Watershed Management Council held a series of California Watershed Management Forums in 1999-2000 at UC Davis. With over 100 invited participants from diverse interests, a statewide dialogue was forged around developing a collaborative, coordinated framework for watershed management in California. These forums culminated in a final report and a set of recommendations called "12 Steps to Watershed Recovery." Step One encourages the formation of a nonprofit California Watershed Network to help connect the varied watershed groups in the state.

RECENT STATE LEGISLATION AND BOND MEASURES

In addition to AB 2117 (Wayne), the Legislature has taken the following recent actions regarding watershed management:

AB 1948 (Dickerson, Chapter 736, Statutes of 2000) – Watershed Funding Study: This signed bill, sponsored by Assemblyman Richard Dickerson requires the Secretary of the Resources Agency to develop a report containing an analysis of major federal, state, and private grants, and of general obligation bond expenditures since 1995, and an assessment regarding whether the results of the projects were quantified and documented. The analysis will also include summaries of types of projects, recipients, performance measures and monitoring, if required, and recommended actions to improve the effectiveness of how watershed funds are administered, including identification of any funding gaps. This report is due to the Legislature on November 1, 2002.

Propositions 12 and 13: These two bond measures, passed in March 2000, included funding for watershed restoration, planning and assessment efforts with some earmarked for specific projects and some for distribution through competitive new grant programs by several agencies.

March 2002 Ballot's Proposition 40: Passed by the Legislature in 2001 as AB 1602 (Keeley, Chapter 875, Statutes of 2001), this proposed bond measure includes significant amounts of funding for new competitive grant programs, with watershed-related efforts qualifying for some of those funds.

ASSESSMENT OF EXISTING STATE WATERSHED PROGRAMS AND THE STATE'S ROLE

“Agencies need to move from handing over money to actually fostering groups and projects.”

-Tomales Bay Watershed Council

Issues regarding the State's role in watershed management were identified early in the study and are summarized below in Table 1.

Table 1: Issues Regarding the State's Role in Watershed Management

- Components of watershed management
 - Implementation of on-the-ground projects (e.g., restoration)
 - Monitoring and assessment activities
 - Watershed planning
 - Organizational support
 - Education and outreach activities
- Technical Assistance
 - Availability of agency staff to meet with local watershed efforts
 - Need for properly trained agency staff to work on local watershed issues
 - Availability of manual and guidance documents (e.g., on planning and monitoring, etc.)
- Regulatory issues
 - Permit coordination for restoration projects
- Coordination between different *state* departments and agencies
- Working with local agencies to leverage their land use authority
- Providing a central location for *state* information and data
 - Accessing information about agencies on the web
- Identifying basic agency mandates (e.g., protect beneficial uses of water; endangered species)
- Identifying state agencies that are landowners

Appendix E contains a matrix of some of the existing State funding programs for watershed management. While the costs of managing and restoring California's watersheds are difficult to estimate, the following information provides some indication of the overall need.

- **Funds requested are in excess of funds available**

For fiscal year 2000, grant amounts requested for watershed restoration efforts exceeded available funding on the order of two to eight times.

Agency / Program FY 2000	Amount Requested Through grant applications	Amount Available
DFG/Coastal Salmon Recovery Program	\$71.7 million	\$9.0 million
CalFed/Watershed Program	\$33.6 million	\$18.2 million
Natural Resources Conservation Service/EQIP	\$15 million	\$7 million
SWRCB/Non-point Source Programs	\$45.2 million	\$12.4 million

- **Estimates of cost of road treatments and fuels management**

While the focus of watershed management projects varies, roads and fuels treatments are often significant factors in watershed health for forested ecosystems. A 1998 study to determine immediate fuel management needs in the Sierra Nevada by Roques Wildland Resources and East-West Forestry Associates concluded that to perform an adequate fuels management program would cost \$963.32 an acre; and the cost to address the impacts of roads in riparian areas would be \$22,750 per mile.

- A completed road inventory and treatment project to decommission 52 miles of private roads in the Redwood Creek Watershed in Humboldt County cost \$9,932 per mile.

- **Estimates of water quality enhancement**

SWRCB received requests for \$45.2 million for their nonpoint source programs from a program with \$12.4 million in available funds. Furthermore, SWRCB has identified, in a formal needs assessment process, a total of \$14.8 **billion** to combat point source and nonpoint source pollution in California.

The above figures demonstrate that the need for increased funding for the basic protection of water quality is greater than available funds. This topic will be addressed in greater detail by a report to the legislature for AB 1948 (Dickerson, chapter 736, Statutes of 2000).

State funding for watershed management is currently being expended largely under the Parks and Water Bonds (Propositions 12 and 13 (2000)). The Interagency Team compiled a list of current state-administered watershed management grant programs to local government, non-profits and watershed groups and analyzed the categories of activities for which funds are available and not available (See appendix E).

IV. WATERSHED PARTNERSHIP CASE STUDY METHODS

To help evaluate the State's role in collaborative and cooperative watershed management efforts, this study chose to select ten (instead of the required three) case studies to better represent the diverse watershed-wide efforts found in different geographic areas of California. However, ten may also not be fully representative of the estimated 200 to 325 watershed partnerships in the state. 'Watershed partnership' is used here in a broad sense to mean a local program or a set of local projects operated by the same group of people from various agencies and stakeholder groups. Applications were solicited through a statewide process in December 2000, and 33 applications were submitted in January 2001.

Based on criteria recommended by the watershed work groups of the California Biodiversity Council and the CalFed Watershed Program, selections of case study watershed partnerships were made by RA and SWRCB in May 2001. The total case studies came to 13 since two of the ten selected watersheds had more than one applicant that qualified. Data on the case studies were collected through a questionnaire and interview process, conducted between August and October 2001, by a three-member team consisting of staff persons from RA and SWRCB, and a consultant from UC Berkeley. Final questionnaire responses were reviewed and approved by the case study respondents. In addition, a sample of representatives from State agencies involved with the local projects was interviewed and their comments incorporated into the findings and recommendations.

Diverse case studies of collaborative watershed partnerships were chosen, as noted in the table below. One-page summaries of each of the case studies can be found in Appendix A.

Watershed Case Study (From north to south)	Counties	Area (Sq. mi.)	Population (Estimated)	Year Began
Humboldt Bay Watershed Advisory Committee	Humboldt	200	70,000	1997
Yuba Watershed Council	Nevada, Yuba, Sierra	1,325	100,000	1997
Clear Lake Basin Watershed Management Project	Lake	530	50,000	1990
Tomales Bay Watershed Council / Lagunitas Creek Effort / Lagunitas Creek TAC	Marin	220/ 103	8,000/ 3,500	2000/ 1988/ 1997
Codornices Creek Watershed Restoration Action Plan	Alameda	1.2	1,200	2001
Santa Clara Basin	Santa Clara, San	821	1,900,000	1995

Watershed Management Initiative	Mateo, Alameda			
Elkhorn Slough Watershed Permit Coordination Program	Monterey	70	10,000	1996
Arroyo Seco Watershed Restoration Feasibility Study	Los Angeles	47	170,000	2000
Santa Ana Watershed Program / Santa Ana Watershed Group	San Bernardino, Riverside, Orange	2,640	4,600,000	1997/ 1986
Los Peñasquitos Lagoon Enhancement Program	San Diego	98	470,000	1983

Locations ranged from Eureka on the north coast to San Diego on the south coast. A large variation in watershed scale (ranging from 1 to 2,640 square miles), population (1,200 to 4.6 million), and population density (from 34 to 4,800 people per square mile) is reflected. Rural, suburban and urban watersheds are included, 15 counties are encompassed, and seven of the nine major basins represented. The age of the collaborative efforts ranges from less than one year to over 18 years, with an average age of almost seven years.

The case studies also represent a fairly wide array of the varied approaches and processes used in collaborative watershed management in California: agency advisory, Coordinated Resource Management Planning (CRMP), consensus, conflict resolution, negotiation, scoping, majority rule, and ad hoc or informal. The case studies vary in their level of independence; with some completely autonomous of any governmental directives while local agency mandates or missions drive several others. Although a few have tackled regulatory permits as their primary focus, most are choosing to pursue voluntary watershed restoration projects that might not get done otherwise.

Limitations of the Evaluation: The sampled efforts are quite diverse, but they were not selected to be statistically representative of all partnerships in the state. Due to the absence of applications in some areas of the state some types of watersheds and communities are missing from this report. A few basins and regions are not represented – the Lahontan/Sierra, Colorado, and San Joaquin. Other limitations of the study include the absence of case studies with large, irrigated agricultural communities (e.g., Central Valley cropland), or highly manipulated hydrologic areas (e.g., Colusa Basin Drain). Since this evaluation focuses on collaborative efforts between the state and others; projects, programs and efforts excluding agency participation (e.g., single or multiple landowner-only projects) are not included.

V. WATERSHED PARTNERSHIP CASE STUDY RESULTS

Case study results were grouped into six categories: sustaining partnership groups; working with government, using science and strategy; getting projects done; finding funding support and technical assistance. Each category contains a brief description of what works well and what needs improvement. There are many things that the State does well. We do not want to lose sight of the positive efforts that the State makes on behalf of watershed partnerships as it attempts to improve its existing programs. The results of the case studies are listed in the following table.

WHAT'S WORKING WELL	AREAS NEEDING IMPROVEMENT
SUSTAINING THE PARTNERSHIP GROUPS	
Watershed partnerships are serving to address common statewide needs: better coordination and communication, watershed-wide strategies, improvement over status quo local conditions, and forums for "peaceful" dialogue.	Overlaying agency regulatory processes on top of specific watershed processes can hinder the partnership's resources to deal with regulatory mandates and schedules.
State and federal funding opportunities are helping initiate and sustain these collaborative efforts.	Not all watershed-scale efforts are integrating or connecting well at the basin-scale or regional level.
Watershed partnerships are working towards accomplishing a broader, long-term common vision together.	New groups struggle to find an organizational structure that can sustain them through the implementation and evaluation phases.
Efforts are initiated through a diverse combination of governmental and non-governmental sponsors.	Continuation of funding for coordinators is uncertain, and many of the larger efforts could use a full-time coordinator.
Watershed coordinators were available at least part-time in each of these efforts, and are often the only staff to help sustain the process.	Technical staff from agencies and universities is not commonly available.
Organizational structure has helped to sustain the older groups involved with decision-making and implementation.	Newer efforts have difficulty ensuring that the diverse stakeholder interests are well represented and that no key interest dominates or is omitted.
Participants want these efforts to be sustained for the long-term as long as they're considered valuable and needed.	Performing outreach and training of the watershed community suffers from lack of attention and funding.
Decision-making tends to be shared by representatives of most of the relevant stakeholder interests.	
Serving multiple roles - especially as forum, advisory, and coordination – appear to be working well for the partnerships.	
WORKING WITH GOVERNMENT	
State, federal, and local agencies assist by sponsoring groups, providing technical assistance, and funding.	State staff does not have enough time and resources to participate fully with these groups.
These local efforts improved relationships between agencies and groups.	Internal bureaucratic red tape prevented some work from being done on the local level.
Improved relationships between state, federal, and local agencies.	The permit process is long, expensive, and confusing to watershed practitioners.
USING SCIENCE AND STRATEGY	
Groups understand that doing watershed assessments and plans is crucial to sound watershed management.	Current funding practices encourage piecemeal planning.
All groups use some sort of 'joint fact-finding' to determine problems and identify solutions.	Limited staff availability for technical services and other necessary support.
All groups use scientific input to their project either by using agency technical staff, university researchers, and/or local experts.	
GETTING PROJECTS DONE	
Many local projects are being done across the State in an effort to improve the health of watersheds. In the process, many members of the local communities are learning about their watershed and becoming involved in efforts to protect them.	Some local groups are starting with implementation projects before they have completed adequate watershed assessments or plans
Local groups are learning how to apply for and get government grants for projects.	Agency funding for watershed scale monitoring, assessment, and planning is very limited compared

WHAT'S WORKING WELL	AREAS NEEDING IMPROVEMENT
	to the need for it. All watersheds should be developing or implementing monitoring, assessment, and management plans.
Local groups are also finding non-agency sources to help support their projects.	The difficulty in getting government permits slows or reduces the number of restoration and implementation projects being done.
Local groups are engaging local agencies (e.g., cities and counties) in a dialogue about how to protect the watershed	
FINDING FUNDING SUPPORT	
Several State agencies have active, established programs that provide grant funding to local watershed groups for a variety of purposes.	Very little agency funding is available to conduct organizational support, monitoring, assessments, and planning activities in watersheds.
Interested parties in local watersheds sometimes get together and collaborate for the first time in order to apply for or get agency grants or assistance.	Agency funding is almost always for a limited period (1-2 years) and does not provide stability to local groups that may not be able to continue after completing a grant. Commitments of agencies to local watershed efforts are not available on a long-term basis.
	Applying for most agency grants is a time consuming and slow process that cannot address immediate or urgent needs.
	Applying for and receiving agency grants requires a significant amount of technical and professional expertise (such as grant writing) that is beyond the ability of smaller or less organized groups.
	Many watersheds receive grants from multiple agencies, but the agencies do not coordinate well among themselves to ensure that these grants are effectively distributed or managed. The possibility of multiple grants working together synergistically is remote given the current lack of required communications between granting agencies.
FINDING TECHNICAL ASSISTANCE	
Where agency staff have the time and support to work with local groups, they are usually well received and provide important support to the groups.	Demands for agency technical assistance are at least twice as great as the resources (i.e., budgets) that the agencies have to provide technical services.
Regionally located agency staff are more familiar with local conditions and provide better services than do staff working out of statewide offices (i.e., Sacramento). Also regional programs are more easily accessible to local groups than are statewide programs.	Technical assistance from different agencies is not well coordinated to ensure that the government provides a unified approach to the local watershed issues. Within individual agencies staff that work on different programs (e.g., regulatory vs. non-regulatory) do not coordinate their activities in specific watersheds.
	Some agencies send inexperienced staff to work with watershed groups on complex problems or continually change the staff persons sent to work with a particular local group.

VI. REPORT FINDINGS

1. Watershed management is a very valuable and holistic approach to meeting comprehensive resource management objectives. The State of California is responsible for the protection and management of its wealth of natural resources.

1a. Watersheds, or drainage basins, provide a very useful, natural unit to integrate and coordinate the many natural resource functions of state agencies, as well as others. Everyone lives in a watershed.

1.b. Watershed management encompasses the various aspects of the watershed and its human community, linking uplands to downstream areas as well as different scientific and professional disciplines to each other. Watershed management includes the protection, use, restoration, and enhancement of landscapes, water quality, water quantity, ecosystems, estuaries, open space, and floodplains.

1c. The amount of resources needed to address all management efforts in a watershed is great and must come from many sources including local governments, the State and federal governments, private interests, and non-governmental organizations. The State's contributions will almost always be only a fraction of the overall needs in a watershed and they need to be carefully targeted.

2. Working in partnership with diverse interests at the local level is a better way for the State to implement its programs. The State cannot accomplish its natural resource responsibilities or protect and restore its watersheds alone.

"We're developing a process of facilitating dialogue among agencies and getting people out of their box."

-Arroyo Seco Watershed Restoration Feasibility Study

2a. There is a large and fast-growing constituency for watershed management in California. An estimate is that there are between 250 and 325 locally-based, collaborative watershed partnerships in California. (See appendix F.)

2b. Environmental laws and programs, both regulatory and non-regulatory, administered by a host of state agencies provide multiple mechanisms to achieve natural resources protection. However, these independently developed programs are not often well coordinated and sometimes conflict with each other.

2c. The Federal Clean Water Act's requirement for pollution control through TMDLs and the Federal and State Endangered Species Act responsibilities for

salmon and steelhead both rely on watershed-based strategies for their implementation. One valuable way to work through these state and federal responsibilities is to engage voluntary partnerships.

2d. Locally based, collaborative efforts at the watershed and basin scale serve to complement the existing programmatic and regulatory structure of the State. These efforts consist of grassroots planning and interaction between communities and state agency officials. Frequently these community partnerships are the driving force behind getting state agencies to coordinate programs. Better and quicker management of state resources at a watershed level is frequently the result.

2e. What is new - and exceedingly popular - are community-based, collaborative efforts among multiple interests having a stake in the watershed's future. While some watershed management efforts have been functioning for years, many watershed partnerships are in their infancy. Landowners, nonprofit groups, and local government have successfully accomplished many watershed restoration and protection projects and practices by themselves and with or without state assistance.

3. The State has multiple programs for land, water, wildlife, coastal, agricultural, forest, and park resources that have evolved from diverse legislative mandates as well as citizen ballot initiatives. These programs are not well coordinated for the most part, but local watershed-scale collaboration can significantly help to provide a neutral setting for discussion among the stakeholders, to work at a watershed level, and to better allow State staff to assist these efforts more efficiently.

3a. These watershed partnerships can provide a neutral setting and creative mechanism to arrive at a common vision and strategy by all of the concerned parties: state, federal, and local agencies; environmental groups; landowners; industry; interest groups; special districts; researchers; educators; and other concerned citizens. Watersheds provide a geographic boundary that helps to logically connect and resolve the natural resource issues that diverse political jurisdictions have in common.

3b. The state agencies report that few of them have specific mandates to do watershed management. However, in order to do the types of projects and programs they are mandated to do, they must work at a watershed level. Otherwise they will not have buy-in for these projects and programs, and will not be successful in attaining results.

3c. State staff frequently volunteers time to participate in watershed partnerships. They do this because they view these local watershed partnerships as important. More often than not, their participation in watershed partnerships is not a formal part of their job. Most watershed partnerships would like more state agency technical staff assistance than is currently available.

4. The State needs assurance that this new, community-based, collaborative approach can be effective in helping to meet its natural resource responsibilities and to improve its watershed management capabilities. Evaluations show reasons for optimism.

Evaluation of the local, collaborative efforts in ten selected watersheds in California are found in appendix A. The findings about achieving success included:

- Local, collaborative watershed groups are effectively organizing, developing strategies, and getting restoration projects and practices done on the ground through joint efforts and a wide variety of public and private assistance.
- Measurable watershed improvements on the ground and in the water are achievable by voluntary, collaborative efforts.
- Time is usually needed (at least 4-5 years) to show demonstrable improvements in the field as measured by environmental conditions.
- State grant programs and technical assistance by agency staff is providing a significant contribution towards local watershed efforts.

5. Understanding the obstacles to success affecting these local watershed partnerships will improve the state's capacity for effectiveness.

The AB 2117 case study evaluation also found obstacles to the success of local watershed efforts, including:

- Lack of appropriate monitoring assistance impedes the ability to measure program effectiveness.
- Difficulty in getting agency permits (*state and federal*) can reduce the number of quality watershed restoration projects implemented each year.
- Funding is difficult to get for organizational support (including watershed coordinators), outreach, watershed assessments, watershed plans, and monitoring. Financial uncertainty and cash flow crises impede groups from strongly sustaining longer-term efforts needed to implement and evaluate a common watershed strategy.
- Absence of useful watershed assessments and plans can lead to restoration projects that don't address priority problems and their causes. These projects may be scattered and not focused on achieving watershed management objectives, and don't use grant funding efficiently.
- Lack of coordination among state agencies impedes: the effectiveness of multiple grants working together, the delivery of appropriate and much-needed technical assistance, development of useful watershed assessments and plans, and the implementation and analysis of an effective monitoring program.
- Lack of connection among neighboring watershed groups, those within a common basin, and similar watershed partnerships in the state impedes sharing of common lessons learned and strategies for success.
- Insufficient numbers of appropriately trained state staff are available to fully participate in the many community-based watershed partnerships active in the state.

"The assessment process creates an intangible value for watershed improvement, by linking the different efforts holistically into one group effort looking at the Big Picture, rather than just agency-by-agency programs."

-Santa Clara Basin Watershed Management Initiative

VII. REPORT RECOMMENDATIONS

The main purpose of this report is to identify what the State can do to help local watershed partnerships. While everyone has a role in making these collaborative efforts successful in protecting and enhancing California's natural resources, the emphasis of the following recommendations is on what the state of California can contribute. AB 2117 asked that the two agencies identify in their Report to the Legislature any needed changes in State laws. Except for the four policy statements below, no changes in State law are being suggested at this time.

The State should reevaluate the ten pilot watersheds selected for this study at a future date to determine progress and should continue to learn from these examples.

ADOPT STATEWIDE WATERSHED POLICY

In order to collaborate fully with watershed partnerships, there are a number of actions the State could take. These policies could be formalized through an Executive Order or Legislation:

1. Adopt a formal policy of endorsing local, collaborative watershed partnerships as being in the State's interest. This policy should recognize: a) the value of developing common strategies and solutions for watershed management at the local watershed level; b) that diverse stakeholder interests should be involved in partnerships to develop long-term solutions with long-term commitments; and c) it is in the State's interest to empower its citizens to help achieve the State's objectives for natural resources management and conservation, water quality, floodplain management, and water supply. The State cannot protect and restore its watersheds alone.

2. Evaluate and implement opportunities to reconfigure State watershed programs and organizations using watershed management as an organizing principle for more efficient and effective delivery of existing programs. Several state agencies have already done this, and their success should be shared with others. Formal agreements, such as a Memorandum of Understanding (MOU), are useful tools

to clarify roles (CalFed Watershed Program MOU is a good example). Steps may include: co-locating key staff from different programs working in the same geographic area, and writing position descriptions that reward field staff for “taking risks” to collaborate with watershed partnerships. Watershed management should not be viewed as a separate new task.

3. Establish a single set of overall principles, policies and flexible guidelines for watershed management. These principles and guidelines need to be specific enough to ensure that interagency expectations are clear to watershed partnerships. Implementation of these principles and guidelines should be delegated to the regional and field level. Field staff and the watershed partnerships should be held to locally established performance measures; not rigid interpretation of principles and guidelines. Through this method, flexibility will be provided to each diverse watershed partnership while accountability is maintained within each state agency.

4. Promote participation in local watershed partnerships by critical stakeholders such as local governments (e.g. cities and counties) and special districts (e.g., RCDs, sewage, water, irrigation, fire districts) who are essential to implementation of watershed protection and partnerships. Local governments have authorities and responsibilities for protection of the environment, public health and safety and to update their general plans. They must demonstrate leadership and commitment for the watershed partnerships to be successful.

DEVELOP A STRATEGIC PLAN

5. Develop a “Strategic Plan for Watershed Management” under the direction of the Resources Agency and the State Water Resources Control Board. This Strategic Plan should define watershed management principles and guidelines for the State based on the policies referenced above. Recommendations 6-19 are important steps that the State can take over the next few years to improve its assistance to watershed partnerships and increase the effectiveness of the partnerships themselves. Some of these recommendations can be implemented immediately while others will take time and/or require new resources. Individual state departments are not identified in this report as having responsibility for these recommendations.

The Strategic Plan should:

- Define goals and principles consistent with recommendations 1-4.
- Identify actions consistent with recommendations 6-19, including establishing lead department responsibilities, and timelines. These recommendations may be further refined through the strategic planning process.
- Identify performance measures for the State and a commitment to evaluating progress.
- Be developed with input from the public, other agencies, and stakeholders.

IMPROVE TECHNICAL ASSISTANCE & COMMUNICATION

"It would have been nice to have some guidance. Something that said that 'in order for a watershed plan to be useful, it has to have these things in it' would have been helpful."

-Humboldt Bay Watershed Advisory Council

6. Develop manuals that define the minimum level of science needed for acceptable watershed assessments, watershed plans, and monitoring activities.

These manuals should provide technical assistance to newly formed watershed partnerships and to those choosing to upgrade their existing assessments and plans. The manuals should build on existing manuals and provide a menu driven approach that can be tailored to the unique conditions of each watershed in California.

7. Participate in and provide technical assistance for watershed management partnerships.

The State should provide technical training using staff experts from all departments that manage natural resources. In many cases, state agencies will provide financial and technical assistance and collaborate with local partnership leaders, but will not necessarily initiate or lead the project. Initiation of watershed projects requires judgment regarding whether local timing and conditions are ripe and should be discussed at multiple levels before proceeding. The State may be especially interested in fostering efforts where there are high priority state resources.

8. Support regional or sub-regional forums for multiple watershed efforts, or large scale basin efforts, in order to effectively communicate and encourage larger scale planning.

The state should work with non-governmental organizations to help initiate these regional forums where they do not exist. The Santa Ana River Watershed Group, the Sacramento River Watershed Program and the Santa Cruz County "Blue Circle" meetings are examples of existing regional forums.

9. Provide easy public access to watershed programs in the various departments.

The State should have a single, accessible point of entry into its network of watershed programs.

10. Establish or co-sponsor core training courses for watershed partnerships in which department personnel and/or non-governmental organizations provide instruction in:

a) organizational development, strategic planning, membership development and involvement; b) watershed planning and assessment; and c) ecological restoration design, construction methods and monitoring.

11. Coordinate regional-level workshops on available watershed management grant programs as frequently as annually for potential grant applicants that are tailored to each region. The State should conduct annual watershed conferences and symposia at the regional and possibly statewide levels with the focus on having local partnerships share successes and lessons learned, and assess needs on a regional basis.

CLARIFY LINK TO REGULATIONS

12. Proactively coordinate state regulatory processes (e.g., TMDLs) and schedules in watersheds where local voluntary partnerships are underway. Watershed partnerships that hope to meet regulatory obligations through watershed plans must coordinate early with the appropriate regulatory agencies. Coordination of multiple regulatory processes, and tailoring these processes to the science of the watershed can be a powerful incentive for grassroots watershed partnerships. Interdisciplinary watershed assessments should be used to provide a common scientific basis for both regulatory and non-regulatory programs. State agencies should seek opportunities to participate in permit coordination programs. An example of an existing program is the Elkhorn Slough Watershed Permit Coordination Program.

“A long-term commitment from agencies and the Legislature will be needed to make things better.”
-Santa Ana Watershed Program

LEVERAGE MULTIPLE FUNDING SOURCES AND CONSIDER LONG-TERM FUNDING

13. Encourage partnerships to seek and leverage diverse funding sources (i.e., federal, local, private) and not depend solely on state grants for their funding.

14. Consider providing State support to local watershed partnership efforts for a sufficient period of time to allow success. The case studies and other research show that five years is an optimal time frame for local groups to become stable and to succeed with measurable watershed improvements. To address the State’s policy of seeking long-term solutions through watershed partnerships, State agencies may wish to further coordinate and use existing resources to provide long-term support for watershed partnerships, contingent on annual performance audits. New watershed partnerships should develop a five-year plan in concert with the major funding agency. Within this five-year period, the partnership should form its operational rules, conduct scientific assessments, develop plans, and implement projects that demonstrate early success. The State Coastal Conservancy’s approach to consider funding for these projects in phases is a model that could be shared with other departments.

15. Consider addressing the two largely unfunded areas in watershed management: operational support and monitoring. Currently, watershed partnerships are receiving the majority of funding for the implementation of projects. However, support is needed to ensure that projects are completed in a timely fashion and that they are being monitored to ensure success. New funds, to the extent available, can be provided for watershed protection and restoration, and should be flexible to include these two very important activities. Monitoring for trends at the watershed or subwatershed scale is an essential part of knowing whether public dollars are being invested wisely and whether management practices are appropriate. Monitoring and project management are essential to the implementation of sound watershed projects and should be considered a priority to ensure the long run success of the projects.

16. Further coordinate delivery of State watershed programs to accomplish goals specified in this report. State agencies should adopt a regional approach to coordinate priority watershed activities and assessments. The State currently contributes funding to support local watershed management efforts through several different programs that are unsynchronized. In the future, these programs should reflect the State's watershed principles and policies developed through the strategic planning process described above and should continue to implement the Best Funding Practices approach endorsed by the California Biodiversity Council.

ENSURE WATERSHED PARTNERSHIPS HAVE ACCESS TO SCIENCE AND MONITORING

17. Support applied scientific and technical studies to improve understanding of watershed functions and restoration processes (e.g., hydrology and geology studies).

ENSURE PUBLIC ACCOUNTABILITY

18. Provide accountability measures for recipients of current or future State funding for local watershed efforts. Accountability can be improved by developing performance measures specific to watershed scale activities. As a condition of receiving State grants, watershed partnerships should be required to perform annual self-evaluations to ensure their effectiveness. The State should provide various self-evaluation tools to help watershed partnerships fully develop their infrastructure. Watershed partnerships should prepare periodic accomplishment reports based on watershed specific performance measures which complement individual project reports prepared for specific grant funded projects.

19. Available funding should be awarded to voluntary watershed restoration and enhancement projects that use available principles, guidelines or watershed assessments developed by the State where these are available.

APPENDICES

- A. AB 2117 Watershed Partnership Case Study Summaries and Status Chart
- B. Participants in AB 2117 Report to the Legislature
- C. Findings of Joint Task Force on California Watershed Management and Interagency Team
- D. Additional State Agency Programs with Watershed Emphasis
- E. Effectiveness Of Watershed Partnerships As Documented In Other Studies
- F. Matrix of Funding for State Watershed Programs
- G. Maps of Watershed Partnerships in California

A. AB 2117 CASE STUDY SUMMARIES

Listed from North to South

1. Humboldt Bay Watershed Action Plan and Enhancement Plan
2. Yuba Watershed Council
3. Clear Lake Basin Watershed Management Project
- 4A. Tomales Bay Watershed Council
- 4B. Lagunitas Creek Effort/ 4C. Technical Advisory Committee
5. Codornices Creek Watershed Restoration Action Plan
6. Santa Clara Basin Watershed Management Initiative
7. Elkhorn Slough Watershed Permit Coordination Program
8. Arroyo Seco Watershed Restoration Feasibility Study
- 9A. Santa Ana River Watershed Program / 9B. Watershed Group
10. Los Peñasquitos Lagoon Enhancement Plan and Program

HUMBOLDT BAY WATERSHED ADVISORY COMMITTEE

Location: Humboldt County **Basin:** North Coast Basin
Area: 200 sq. mi. **Population (est.):** 70,000 **Density:** 350 people/sq. mi.
Year Formed: 1997 **Staff:** 0.5 FTE coordinator; 0.3 support staff

Mission or Purpose: Mission is to improve the watershed's anadromous salmonid populations and related resources while considering regional ecological and socio-economic needs.

Multi-stakeholder Partners: 13 voting members + non-voting federal and State agency reps. Interest group voting members: non-industrial timber, landowners, lowland, watershed groups/residents, environmental groups, recreational fishing, commercial fishing, business, watershed restoration, industrial timber, education/outreach, local government, at-large, science/technical.

Current Issues of Focus: 1) Improving freshwater habitat for anadromous salmonid population; 2) Getting restoration to happen on the ground; 3) Role of Large Woody Debris (LWD) in fish habitat improvement.

Funding Sources (est.): State – < 20% Federal - >80% Local – 0 Private - 0

Watershed Assessment done? Not of entire bay watershed. Individual WA's for Pacific Lumber for Freshwater Creek as part of HCP and also upper Elk River; also portions of sub-watersheds by Simpson Timber, BLM, City of Arcata, Humboldt County road inventories. Enhancement assessments funded for other areas. More needed for watershed-wide assessment.

Watershed Plan done? Phase I completed. Draft Bay Watershed Action Plan (aka "Humboldt Bay Salmon and Steelhead Conservation Plan") chapters 1-3 completed June 2001. Next to come in Chapter 4 are detailed sub-watershed information, objectives, and actions.

Projects Implemented? On-going not by Group but by members, some with 20 years of experience with stream and fish restoration projects (riparian fencing & planting, fish rearing, road culvert replacements).

Monitoring Effort? Baseline monitoring primarily, with trend monitoring by others.

Most Proud Accomplishments: Getting first draft of the Plan completed, staying together this many years, being able to have open and frank discussions with members, and building trust.

Effectiveness In Protecting and Enhancing the Watershed? *"The Million Dollar Question. We plan on being effective, but it's going to take lots of small steps first."*

Main Lessons Learned? 1) Need sustainable funding over time, to prevent boom and bust mentality and a rush to grab whatever funds are available for fear there won't be anything next year. 2) Need the state and county governments to use watershed boundaries better to support this infrastructure. 3) Need better and easier access to information to help us.

Message to the Legislature or Governor? Look at watersheds as an integral part of the State's infrastructure for water and fish, that we can't live without. Just like roads, watersheds need ongoing funds to maintain their values over the long term, this is not a short term problem that can be fixed and then left alone. State and local governments should all use the same watershed boundaries as the basis for land use planning to ensure we are all on the same page.

YUBA WATERSHED COUNCIL

Location: Nevada, Yuba and Sierra counties **Basin:** Central Valley (Sacramento) Basin
Area: 1,325 sq. miles **Population (est.):** 100,000 **Density:** 75 people/ sq. mi.
Year Formed: 1997 **Staff:** 1.0 FTE coordinator, 0 support staff

Mission or Purpose: The Council is a community forum of stakeholders which is taking the initiative to: better appreciate the complex watershed relationships in the Yuba River watershed and its environs; protect, restore and enhance watershed resources where needed; and maintain a sustainable watershed resource base for future generations.

Multi-stakeholder Partners: Anyone who signs on to the MOU is a decision-maker, which now has 36 public and private stakeholders representing 4 categories: Federal and State Agencies =6, Local Government Agencies = 7, Businesses and Commercial Interests =2, Community Interest Groups/ Individuals = 21.

Current Issues of Focus: 1) trend monitoring (immediate crisis of bacterial contamination in river from unknown source) 2) planning.

Funding Sources (est.): State - 50% Federal - 50% Local – 0 Private - 0

Watershed Assessment done? A full-scale WA is in progress by South Yuba River Citizen's League (SYRCL) (not the Council), with completion date expected in Jan. 2002. Includes water quality, biological, baseline conditions, monitoring, roads, and forest conditions. USFS is also doing a Watershed Analysis.

Watershed Plan done? Only goals and objectives are done so far. A wild & scenic river corridor plan for one tributary is on-going by state and federal agencies.

Projects Implemented? None yet by Council, only by others.

Monitoring Effort? Council has a Monitoring Committee, which is trying to come up with a strategy. DPR monitors quarterly on its lands, RCD monitors Bear River, Friends of Deer Creek monitor that creek. Yuba River Fisheries Work Group monitors wild salmon and steelhead populations in the lower Yuba River. The South Yuba River Citizens League monitors water quality monthly throughout the Yuba Watershed.

Most Proud Accomplishments: 1) Getting goals and objectives as a collaborative effort; 2) Conducting Watershed Festival in Spring '01, 3) Monitoring effort over past year.

Effectiveness In Protecting and Enhancing the Watershed? Too early to tell.

Main Lessons Learned? Non-profit stakeholder groups must be able to participate in collaborative efforts in a technically sophisticated manner.

Message to the Legislature or Governor? 1) A reliable funding source is needed that secures this type of restorative watershed management for the future. Uncertainty of funds is single biggest difficulty and "*finding funding sources is now overwhelming*"; 2) State law must recognize the political entities of watershed councils in order for the Councils to retain their relevance to local and regional land and water management decisions. Otherwise, participants eventually lose sight of the reason such groups have formed.

CLEAR LAKE BASIN WATERSHED MANAGEMENT PROJECT

Location: Lake County **Basin:** Central Valley (Sacramento) Basin
Area: 530 sq. miles **Population (est.):** 50,000 **Density:** 94 people/sq. mi.
Year Formed: 1990 **Staff:** 0.5 FTE coordinator plus <1.0 FTE staff

Mission or Purpose: Purpose of the Clear Lake Basin Watershed Management Project is to “unite resource management agencies and concerned members of the public in a common effort to solve resource associated problems in water quality, water quantity, and watershed management for the Clear Lake region.” Vision is to maintain and enhance the ecosystem of the Clear Lake Basin.

Multi-stakeholder Partners: The original MOU had 42 agencies and groups signed on. Basin project is now conducted through the county-wide Resources Management Committee, that represents over 4 county departments and several special districts, 2 cities, 7 state agencies, 4 federal agencies, 2 RCDs, 2 agricultural groups, 4 business interests, 1 environmental group, 2 academics and 5 local tribes. Final decisions reside with Board of Supervisors.

Current Issues of Focus: 1) Nutrient & sediment control to Clear Lake to reduce algae & non-hydrilla aquatic weed problem; 2) Eradication of hydrilla as a noxious weed in the lake (recent invasion); 3) mercury pollution to lake.

Funding Sources (est.): **State** -70% **Federal** - 30% (CalFed =3%) **Local** - in-kind **Private** - in-kind, cost-share on landowner projects.

Watershed Assessment done? Several watershed assessments completed for basin and one sub-basin for erosion sources and solutions in 1997 & 1999. Upper watershed analysis done in 1999 using the federal approach, characterizing the watershed, current and reference conditions, and making recommendations towards improved land use. *“We can’t address a watershed of this size without good assessments.”*

Watershed Plan done? Implementation Plan for Recommended Actions in Clean Lakes Report (EPA funded) was adopted in 1994 by Board of Supervisors. Update is on-going, but only partially funded.

Projects Implemented? On-going by group, sub-groups, and others. Projects include erosion control BMP manuals, tree planting, trash removal, fish ladder construction, education, weed management.

Monitoring Effort? Limited trend monitoring by members. Monitoring strategy to be done.

Most Proud Accomplishments: 1) Improved communication and coordination among agencies, tribes, and citizen groups that has not become routine; 2) Stakeholders involved more with better buy-in to projects being implemented by the subcommittees and the CRMPs.

Effectiveness In Protecting and Enhancing the Watershed? Lake clarity has improved significantly since 1991-92, from 1.0 to 2.5 feet (Secchi disk depth). Several theories exist about why it has improved, though no agreement yet. Community awareness of cleaning up lake has become great.

Main Lessons Learned? 1) Groups should involve the public when developing and implementing projects all the way through; 2) Get everyone at the table at the same time.

Message to the Legislature or Governor? Need baseline funding for watershed coordinator to keep the process going and provide consistency. *“State should appreciate that local government and volunteer watershed restoration efforts are a gift to the State.”*

TOMALES BAY WATERSHED COUNCIL

Location: Marin County **Basin:** San Francisco Bay Region
Area: 220 sq. miles **Population (est.):** 8,000 **Density:** 36 persons / sq. mile
Year Formed: 2000 **Staff:** 0.75 FTE coordinator + part-time bookkeeping

Mission or Purpose: Purpose of the council is to create a comprehensive watershed management plan for Tomales Bay to address nonpoint sources of pollution and degradation associated with on-going human activities.

Multi-stakeholder Partners: 24 members represent all of the stakeholders found in the watershed: Fed = 2; State = 4; Local = 4; Business = 2; Environmental = 1; Agriculture = 1; Recreation = 1; Aquaculture=2; Homeowners = 3; Other = 5.

Current Issues of Focus: 1) Drafting the watershed plan; 2) Protection and restoration of water quality and habitat; 3) Education and outreach.

Funding Sources (%): State - 68% Federal - 0 Local - 7% Private - 25%

Watershed Assessment done? Using consultants to conduct an assessment by 2/02, with \$62,000 in Coastal Conservancy funds (though requested \$400,000).

Watershed Plan done? Draft Plan & Assessment expected to be completed by February 2002. Goals and Objectives are agreed upon. Strategies will be based on Watershed Assessment.

Projects Implemented? Lots of habitat restoration projects done in past, like fish ladder construction. Some projects would be done without the Council, but with no coordination.

Monitoring Effort? There will be a monitoring component in the Plan.

Most Proud Accomplishments: 1) Sustained energy and commitment to the council effort; 2) Working on assessment with the obtained funds, and staying on track; 3) Use of informal process in order to move quickly.

Effectiveness In Protecting and Enhancing the Watershed? Too soon to tell.

Main Lessons Learned? 1) Involvement by everybody is very important, or those left out will yell later; 2) “*Communicate, communicate, communicate to your customers – which is the public.*”; 3) “*Agencies need to change their paradigm to be more receptive to listening sooner and talking earlier.*” 4) Keep focus on your plan. Avoid current events and boiling points.

Message to the Legislature or Governor? 1) Use the Coastal Conservancy model for fostering local watershed efforts “*by moving from handing over the money to actually fostering groups and projects*”; 2) Supporting a continuous effort is very important – don’t let these efforts die; 3) Need better staffed agencies to go after the bad guys through better enforcement of existing laws. Without at least a perceived threat of enforcement, voluntary restoration efforts won’t be successful; 4) Link state funding to resource protection needs.

**LAGUNITAS CREEK WATERSHED:
COORDINATION EFFORT & TECHNICAL ADVISORY COMMITTEE**

Location: Marin County **Basin:** San Francisco Bay Region
Area: 103 sq. miles **Population (est.):** 3,500 **Density:** 34 people / sq. mile
Year Formed: late 1980s / 1997 **Staff:** Effort = 0.1 FTE / TAC = 2.0 FTE biologists + support

Mission or Purpose: Effort - Goal is to understand how best to coordinate a diverse range of groups that work for the restoration and protection of the natural resources of Lagunitas Creek watershed.
TAC – To implement the Sediment and Riparian Management Plan as mandated by SWRCB Order WR95-17 for the Marin Municipal Water District (MMWD).

Multi-stakeholder Partners: Effort – Led by County, with no membership or formal decision-making;
TAC – Advisory to the MMWD board, with total of 27 members: Fed = 3; State = 4; Local = 4; Academic = 5; Enviro = 8; Homeowners = 1; Other = 2 .

Current Issues of Focus: Effort – habitat preservation / fish passage / water quality / sediment and erosion. TAC – streamflow releases & minimum flows / sedimentation / riparian & stream habitat management for coho salmon and steelhead.

Funding Sources (%): TAC: **State** – 70% **Federal** – 13% **Local** – 16% **Private** - 0

Watershed Assessment done? Effort – n/a. TAC - No broad watershed assessments currently underway, but specific assessments of current sediment sources (San Geronimo Creek Watershed Assessment), water quality (RWQCB) are being conducted, with sediment and riparian assessments done in past.

Watershed Plan done? Effort – n/a. TAC – “Sediment and Riparian Management Plan” adopted in 1997 by MMWD, but need a broader watershed plan; only doing various portions now.

Projects Implemented? Effort – n/a. TAC - Yes, projects are being done: erosion control, large woody debris in stream, planting, fish ladders. Before the TAC, projects were not as well engineered and fewer were done. *“The Plan is the key to getting project grants.”*

Monitoring Effort? Effort – n/a. TAC - Yes – SWRCB Order and “Lagunitas Creek Aquatic Resources Monitoring Work Plan” (1996) direct monitoring efforts for water quality, streamflow, and fish.

Most Proud Accomplishments: Effort – 1) Significant change in county’s role and attitude in last few years; 2) Effect of Fish Committee and Septic Committee; 3) Educational efforts, such as with FishNet4C; 4) NGO’s increasing in activities and advocacy. TAC – 1) Moving forward with tangible projects; 2) hiring a really good fishery biologist; 3) good monitoring of fish populations.

Effectiveness In Protecting and Enhancing the Watershed? Effort – n/a. TAC: See much more concentrated coho populations near instream LWD now than before, but still can’t meet temperature mandates of State Order at all times of the year. Minimum flows are better for fish.

Main Lessons Learned? Effort – Ability to keep organization alive is important, or group will not last; agencies tend to take their own infrastructure for granted, and not appreciate the limits of volunteerism. TAC – 1) Stay focused on objectives; 2) Guidelines would have helped early on.

Message to the Legislature or Governor? Effort - Enforcement is needed by RWQCB especially. TAC: 1) Coordinated permitting between federal, State and regional agencies remains the single most important change needed to advance fishery restoration; 2) Greater funding should be provided for watershed coordinators to facilitate community-based watershed plans, restoration and protection.

CODORNICES CREEK WATERSHED RESTORATION ACTION PLAN

Location: Alameda County **Basin:** San Francisco Bay Region

Area: 1.2 sq. miles

Population (est.): 1,200

Density: 1,000 people/ sq. mi.

Year Formed: 2001

Staff: 0.2 FTE coordinator + 0.5 technical assistant

Mission or Purpose: Plan's goal is to improve water quality and restore a self-sustaining steelhead population in Codornices Creek and to create better watershed awareness among the public.

Multi-stakeholder Partners: Stakeholder-based watershed group is not formed yet.

Current Issues of Focus: Restoration of creek habitat; Enhancement of steelhead habitat; Improvement of water quality, including reduction of pesticide levels in creek, (e.g., diazinon); Control of invasive plant species along creek; Increasing public awareness of the watershed.

Funding Sources (%): State – 95% Federal – 0 Local – 0 Private – 5%

Watershed Assessment done? Proposal to begin full watershed assessment in Nov. 2001, with initial summary completed by Sept. 2002.

Watershed Plan done? Proposal to prepare community-based Watershed Restoration Action Plan for Codornices Creek by Urban Creeks Council, to be done by June 2003.

Projects Implemented? Projects were already being done by Urban Creeks Council, but comprehensive strategy was needed. Lots of assistance by local residents and neighborhood groups with creek day-lighting projects, including weekly work parties to keep invasive vegetation out and bring in amenities like benches, new trees. Proposed projects to also include fish passage through city road culverts.

Monitoring Effort? Intent is to have a monitoring strategy in proposed plan, including a water quality monitoring and evaluation program in Phase I. Baseline and trend monitoring by nonprofit since 1995.

Most Proud Accomplishments: 1) Getting the two large grants within past 6 months; 2) Working through contentious process over creek's future with one property owner by Urban Creeks Council.

Effectiveness In Protecting and Enhancing the Watershed? Too soon to tell with new group. Sponsor day-lighted creek in two projects in 1994 & 1997 for 530 feet, with much volunteer help. Now most of creek flows openly along almost 3.5 miles.

Main Lessons Learned? Too early to say.

Message to the Legislature or Governor? 1) Amend the permitting process and fee structure to make it easier for restoration groups to obtain the necessary permits for creek restoration and enhancement. Strict oversight and language would be needed to define "adequate restoration and enhancement"; 2) Upfront funding is needed to help sustain project at the beginning; have a funding gap now, and can just barely keep going until funding comes through; 3) Organizational capacity to support operating needs of the watershed group; 4) Funding for small groups of friends-of-creek-type groups; 5) Support creative financing similar to this year's AB 104; 6) Post-project monitoring funding is needed. 7) *"Having a clear State watershed management program would be of help."*

SANTA CLARA BASIN WATERSHED MANAGEMENT INITIATIVE

Location: Santa Clara, San Mateo, Alameda counties **Basin:** San Francisco Bay Region
Area: 821 sq. miles **Population (est.):** 1,900,000 **Density:** 2,314 people/ sq. mile
Year Formed: 1996 **Staff:** 1.0 FTE coordinator + in-kind staff

Mission or Purpose: Mission is to protect and enhance the watershed, creating a sustainable future for the community and environment. Purpose is to develop and implement a community-based comprehensive Watershed Management Action Plan for the Basin.

Multi-stakeholder Partners: Led by Core Group of 33 members who have signed the Signatory Document, currently composed of: Local = 11; State = 2; Fed = 3; Business = 5; Environmental groups = 7; Landowner groups = 2; Civic = 1; Recreation = 1; Sub-Basin group = 1.

Current Issues of Focus: 1) Water pollution from runoff; 2) RWQCB Basin Plan amendments for copper and nickel; 3) contaminant TMDLs; 4) Upper Guadalupe Flood Control project; 5) Watershed assessment; 6) Riparian and baylands restoration, including fish habitat; plus others.

Funding Sources (%): State – 0 Federal – 11% Local – 88% Private - 1%

Watershed Assessment done? Vol. 1- Basin-wide Watershed Characteristics report completed 5/00; Assessments of first 3 sub-watersheds (of 12) to be done by Summer 2002. Coyote Creek stormwater assessment expected in Summer 2002. Vol. 2 – Watershed Assessment Report expected spring 2002.

Watershed Plan done? Vol. 3- Draft Watershed Management Action Plan expected 8/02, Final 2/03.

Projects Implemented? Some projects would have occurred without the plan but may have had less stakeholder involvement (e.g., copper/nickel TMDL). Those with regulatory drivers or Measure B commitments (Clean Safe Creeks and Natural Flood Protection) will get done anyway.

Monitoring Effort? Monitoring is required in copper/nickel action plans and NPDES permits for POTWs, SCVURP3, and for SCVWD stream maintenance. The Action Plan is not completed, but monitoring components are included in the Short-term Data Management Plan and Long-term Data Management Plan.

Most Proud Accomplishments: 1) Surviving 5 whole years and working better together each year; 2) Getting Copper & Nickel TMDL done and implemented; 3) Evolving from an information-sharing forum into a conflict-resolution one, and avoiding lawsuits where possible.

Effectiveness In Protecting and Enhancing the Watershed? Success of Copper & Nickel TMDL implementation shows reduction in levels for South Bay that is now close to being delisted due to commitment to the Cu/Ni Action Plans.

Main Lessons Learned? 1) Expect at least 18-24 months while budget and work plan cycles catch up with these huge processes. It takes at least one year for a group to “gel”. Need long-term view of process. Patience is a key; 2) When dealing with many issues, you must make choices on prioritization; 3) Stability and experienced staff are needed for these partnerships to work well; 4) Require implementation, monitoring and adaptive management. Don’t allow good Plans to gather dust; 5) Celebrate success and share information about what is working; 6) It takes a combination of agency and local effort to form a large basin watershed group; it couldn’t be solely homegrown.

Message to the Legislature or Governor? 1) Fund start-up of groups and facilitation and meeting management training for staff and group leaders. “*Walk the talk*” on your own commitment to stakeholder efforts; 2) NGOs and community groups need financial and technical resources to be effective participants; 3) Support plan development as a method to insure stakeholder support; 4) Don’t try to legislate watershed groups as a one-size-fits-all. Groups of this sort tend to be broad in both scope and participation. These groups implement their projects in a broad fashion that should not be defined by the State; 5) Planning, assessment and monitoring funding are too difficult to get now and need to be more obtainable.

ELKHORN SLOUGH WATERSHED PERMIT COORDINATION PROGRAM

Location: Monterey County **Basin:** Central Coast Region
Area: 70 sq. miles **Population (est.):** 10,000 **Density:** 143 people/ sq. mi
Year Formed: 1996 **Staff:** 0.5 FTE coordinator + 1.5 Technical staff

Mission or Purpose: Goal is to reduce disincentives to farmers, ranchers, and landowners to implement voluntary erosion control, sediment reduction, and habitat improvement projects in the area by providing an expedited regulatory review process for specific types of conservation projects.

Multi-stakeholder Partners: NOT A STAKEHOLDER-BASED WATERSHED GROUP. Sustainable Conservation, NRCS, RCD as leads. Regulatory agency partners were 6: State = 3, Fed = 2, Local = 1.

Current Issues of Focus: 1) Overcoming the barrier of permitting to doing restoration work on private lands. 2) Getting projects done that weren't getting done. 3) Trying to ensure that projects get permits and also good technical advice.

Funding Sources (%): State – 0 Federal – 90% Local – 0 Private - 10%

Watershed Assessment done? Ongoing assessments by NRCS and Elkhorn Slough Foundation. Needed to have surveys and data in place in order to get permits and biological opinions.

Watershed Plan done? Not by this group or project. Movement towards this now.

Projects Implemented? Yes - 26 farms participated in first 3 years. Landowners can volunteer to implement one of the 10 permitted conservation practices, such as stream bank protection, construction of sediment basins, installation of buffers and filter strips, on their property.

Monitoring Effort? NRCS performs Implementation Monitoring: monitors the progress of on-site project construction, ensures that the conditions and specifications of the permits are met, and prepares an annual report of activities to the regulatory agencies.

Most Proud Accomplishments: 1) *"Proud of doing something that others said couldn't be done!"* More farmers participated than originally projected; 2) A broader range of projects was implemented, particularly in riparian areas and wetlands that were avoided due to previous regulatory restraints; 3) Quality of projects was improved, with farmers willing to work to higher standards in exchange for streamlined permitting process; 4) Formed good relationships among the agency permit players.

Effectiveness In Protecting and Enhancing the Watershed? Projects prevented more than 33,000 tons of sediment from entering Elkhorn Slough, the tributaries, and the Bay.

Main Lessons Learned? 1) Agency staff needs to look to the net environmental gain: short-term disturbances during project implementation usually create long-term gain; 2) Education is a two-way street: both agencies and farmers learned something; 3) Look for unexpected partners: past history does not preclude new shared goals; 4) Need state agency buy-in from the top and clear agency directive for a process like this – if it is good for the watershed; 5) NGO can play a role as intermediary for neutrality, and one with ability to move quickly without the bureaucracy. *"We can do the work of government by catalyzing and pushing, when no one else can."*

Message to the Legislature or Governor? 1) Change law, policy or regulation to recognize the difference between environmental enhancement projects and development projects and to allow an alternative process. The current system punishes private landowners who voluntarily seek to improve environmental quality and is a disincentive for fixing the problem; 2) Develop a CEQA categorical

exemption for the smaller kinds of restoration and environmental enhancement projects that provide significant benefits to the environment while encompassing minimal real risk of adverse impacts.

ARROYO SECO WATERSHED RESTORATION FEASIBILITY STUDY

Location: Los Angeles County **Basin:** Los Angeles Region
Area: 47 sq. miles **Population:** 170,000 **Density:** 3,617 people/sq. mile
Year Formed: 2000 **Staff:** 1.0 FTE coordinator + 1.0 FTE project managers

Mission or Purpose: The vision of the study is to develop an environmentally sustainable watershed plan for the mountain and urbanized stretches of the Arroyo Seco that will integrate issues of stream and flood management, water quality, habitat rehabilitation, educational and community recreational opportunities.

Multi-stakeholder Partners: NOT A STAKEHOLDER-BASED PROCESS. Arroyo Seco Foundation & North East Trees are nonprofit organizations and co-leaders of study. Core team of 7 makes final decisions: sponsors =3, state =2, federal =1, consultant =1. Agencies mainly involved with Technical Review Committee.

Current Issues of Focus: Flood and stream management, water quality improvement, aquatic and riparian habitat rehabilitation, recreational opportunities, land protection against urban land use encroachment; trail user conflicts

Funding Sources: State – 81% Federal - 19% Local – 0% Private – 0%

Watershed Assessment done? Assessment is part of the Plan. Phase I: data collection and initial planning review to be completed March 2001.

Watershed Plan done? Plan is part of the Study. Phase II: restoration feasibility expected to be complete by 11/01. This will be the first comprehensive watershed management plan for the entire Arroyo Seco watershed.

Projects Implemented? No project implemented to date. Group too young.

Monitoring Effort? No monitoring. Group too young.

Most Proud Accomplishments: 1) Getting the word out that channel restoration is feasible; 2) Effective in building a vision and relating that to what residents can do to help; 3) that Arroyo Seco Foundation's century-old legacy and institutional memory about this creek can now move beyond this one small watershed.

Effectiveness In Protecting and Enhancing the Watershed? Too early too tell.

Main Lessons Learned? Local groups can help the Legislature succeed by educating voters about watersheds. We advance our vision of watershed management by getting the watershed message out to everyone. Watershed management is how you integrate planning across jurisdictions.

Message to the Legislature or Governor? 1) Need long-term commitment from state agencies to get the work done, rather than continue with current piecemeal and uncertain approach. This often creates a hand-to-mouth local group effort; 2) Urban areas require multi-million dollar efforts, but it's too difficult to chase each grant for each piece of the effort.

SANTA ANA RIVER WATERSHED GROUP & PROGRAM

Location: Orange, San Bernardino, Riverside counties **Basin:** Santa Ana Region
Area: 2,640 sq. miles **Population:** 4,600,000 **Density:** 1,742 people/sq. mile
Year Formed: Group - 1997 / Program - 1986 **Staff:** 0.5 – facilitator/ 5.9 Staff

Mission or Purpose: Group – Approach is to improve governance to address concerns, issues and opportunities that are of watershed-wide significance, to promote, and to provide for better watershed management and, then to provide a mechanism to get things done “on-the-ground”. Program – Vision is to counteract the human effects in the watershed with ongoing management, restoration, and education to maximize resources for wildlife and people and to restore the natural functions of the river.

Multi-stakeholder Partners: Group – Conveners are 3 counties, Santa Ana Watershed Project Authority (SAWPA), and Orange Co. Sanitation District; MOU includes key federal and state agencies; open to all. Program – Orange Co. Water District, Santa Ana Watershed Association (5 Resource Conservation Districts) are leaders; MOU with 7 total: Fed –2, State –2, Local –2, Environmental –1.

Current Issues of Focus : Group - Organic waste management, conjunctive water use, data management, smart growth. Program - Invasive plant control (e.g., *Arundo*), endangered species management and recovery, public involvement, water quality (nitrate removal through wetlands) and water quantity.

Funding Sources: Group - **State** – 0 **Fed**- 49% **Local** – 51% **Private** – 0%. Program - **State** – 66% **Fed** – 24% **Local** – 10% **Private** – 0% (Santa Ana River Conservation Trust Fund formed from mitigation funds, self-sufficiency is goal).

Watershed Assessment done? Group - Not by group on a watershed-wide basis. Program - Summary of river resources and some riparian habitat species in recent Environmental Assessment of the Watershed.

Watershed Plan done? Group - No plan intended, just focused elements and pieces. Program - No plan.

Projects Implemented? Group and Program – wetland, river and riparian restoration; weed eradication; endangered species habitat restoration.

Monitoring Effort? Group - Not yet. Program - Ongoing trend and project monitoring.

Most Proud Accomplishments: Group - The connections made and the collaborations that have resulted. Program - Moving away from traditional wetland approach to whole watershed/ ecosystem approach.

Effectiveness In Protecting and Enhancing the Watershed? Group - Yes, through establishing new programs. Program - Yes, endangered Least Bell’s vireo population has increased from less than 20 pairs to more than 300 pairs in past 20 years; populations of songbirds have increased significantly. OCWD has constructed 465 acres of wetlands. Certain tributaries (e.g., San Timoteo) are now *Arundo*-free.

Main Lessons Learned? Group - Collaborative dialogue process promotes innovation (not just compliance), collaboration and better relationships through the freedom to brainstorm. Program - It will take a long-term commitment to make things better.

Message to Legislature or Governor? Group - 1) Encourage collaborative dialogue-based, watershed approaches (“*It is truly fun and a joy to move along*”); 2) Use MOUs to progress from static plans to moving programs. Program - 1) A long-term, commitment will be needed to make things better; 2) We

need funding we can put in the bank and work from for decades. *“Perpetual care is needed – similar to cemeteries.”*

LOS PEÑASQUITOS LAGOON ENHANCEMENT PLAN & PROGRAM

Location: San Diego County **Basin:** San Diego Region **Area:** 98 sq. miles
Population: 470,000 **Density:** 4,796 people/sq. mile **Year Formed:** 1983 **Staff:** 0.5% FTE

Mission or Purpose: Purpose of Foundation is to help restore the lagoon to its proper functioning condition, and to make recommendations to the Coastal Conservancy for allocation of the Lagoon Enhancement Fund (created in 1982 from development mitigation fees).

Multi-stakeholder Partners: Lagoon Foundation board composed of 9 members: City of San Diego; California State Parks; business; property owners; community members; and environmental groups.

Current Issues of Focus: Restoration of salt marsh and reducing impacts (e.g. accelerated sedimentation in lagoon channels, encroachment of freshwater plants into salt marsh) associated with year-round, accelerated flows of freshwater into the lagoon from the lower watershed.

Funding Sources: **State** - 98% (includes Lagoon Enhancement Fund) **Federal** - 0% **Local** - 2%

Watershed Assessment done? No, a complete assessment of the entire watershed has not been done due to funding limitations. Foundation and City of San Diego plan to prepare a comprehensive assessment.

Watershed Plan done? Yes. Los Peñasquitos Lagoon Enhancement Plan and Program (1985) and an update due in Summer 2002. City of San Diego is also doing a Master Watershed Plan for the area.

Projects Implemented? Ongoing projects in the lagoon are to reduce sediment, study hydrology, create a low flow channel, map the entire watershed, and do educational programs. *“Proceed carefully and emphasize adaptive management since even the experts don’t know everything.”*

Monitoring Effort? Trend monitoring of lagoon health by San Diego State and others since 1986.

Most Proud Accomplishments: 1) The use of low cost adaptive management based on science to facilitate success in managing such a dynamic natural system (e.g., maintaining tidal flushing); 2) Addressed community concerns (e.g., helping the lagoon to smell like a normal saltwater marsh) to generate community interest in order to facilitate outreach programs and workshops designed to disseminate scientific information to stakeholder groups; 3) Having a proactive board that has sustained involvement since 1982; 4) Overall improvements in water quality within the lagoon channels.

Effectiveness In Protecting and Enhancing the Watershed? Yes, the Foundation has been very successful in maintaining an open lagoon mouth and improving water quality conditions in lagoon.

Main Lessons Learned? Need for a holistic approach to comprehensive management of the entire system with regard to overall system function, rather than piecemeal management of system components.

Message to the Legislature or Governor? 1) Increase financial support for restoration and enhancement projects by: a) requiring ongoing mitigation payments for all impacts associated with development, not just one-time payments; b) establishment of State, high interest environmental endowment funds to generate income from one-time mitigation payments; c) establishment of a protocol that redirects monies from permit fines (e.g., RWQCB’s Cease & Abatement, city lawsuits) directly back to watershed of impact; 2) Increase the role of regional agencies in regulating new and existing development in coastal watersheds; 3) Base funding on resource needs rather than competition.

**STATUS COMPARISON OF CASE STUDIES:
Age, Staffing, Assessment, Plan, Monitoring, Project Implementation**

Case Study	Date Began	Staff (FTE)	Assessment	Plan	Monitoring	Projects
1	Aug. 1997	0.5 Coord. 0.3 support	Partial – for THP / HCP	On-going Phase I done	Baseline <u>Trend</u> by others / data not shared well	On-going by others
2	March 1997	1.0 Coord. 0 support	Not by Council	Partial Plan on- going / For only one tributary by others	Monitoring Comm. – no strategy yet / Separate efforts by members	Not by Council yet
3	Feb. 1990	< 1.0 agency staff + part-time Coord.	Partial – for targeted problems & selected sub- basins	1994 Lake Plan adopted by BOS / Update On-going, only partially funded	Limited <u>trend</u> / Monitoring strategy to be done / data not shared well	On-going by group, sub-groups, and others
4A	Jan. 2000	0.75 Coord. + part-admin.	In progress –by 2/02	In progress –by 2/02	To be a Plan component	Uncoordinated by others in past
4B	Late 1980s	0.1 Staff	N/a	N/a	N/a	N/a
4C	1997	2.0 Biologists / some support	Partial – for sediment and riparian	1997 Plan for sediment & riparian only	<u>Trend</u> - Aquatic Resources Monitoring Plan	On-going projects based on Plan
5	Feb. 2001	0.2 Coord. + 0.5 Tech.Asst.	To begin 11/01 & done by 9/02	To be done by 6/03	<u>Project</u> / <u>baseline</u> & <u>trend</u> by others	Past projects by sponsor
6	July 1995	1.0 Coord. + In-kind Staff	Watershed Characteristics done 5/01 / Assessment by 12/01	Draft Plan by 8/02 Final by 2/03	Short-term Data Mgt. Plan done / Long-term Plan outline / Permit <u>Compliance</u> mon. by others	Projects by others / Intent is to have projects based on Plan
7	1996	0.5 Coord. + 0.2 Tech. Asst. & 0.2 Admin.	Various assessments by others	Not by this effort	<u>Implementation</u> , <u>Project</u> & <u>Effectiveness</u> / <u>Trend</u> by others	On-going by program
8	Jan. 2000	0.5 Proj. Mgr. + 0.5 Tech. Coord. 1.0 Cons. Coord.	Data collection completed 3/01 / more studies needed	Watershed Restoration Feasibility Plan by 11/01	None yet / No good trend monitoring data available	Past projects by sponsors
9A	1997	Part-time Facil.	Assessments by issue	N/a	N/a	N/a
9B	1986	0.5 Director + 5.0 Tech. + 0.4 Admin.	River & riparian resources only	No watershed plan	<u>Trend</u> monitoring by staff & others	On-going by Program
10	1983	Part-time Project Coord.	Partial only	1985 Plan for Lagoon only / Watershed-wide update by 7/02	Plan component <u>Trend</u> monitoring	On-going by Program & others
Total (of 13)	---	Lead Staff: 10 Coord. / 1 Facil. / 2 Biol.	Yes/ongoing = 4 Partial = 7 N/a = 1 None = 1	Yes/ongoing = 7 Partial = 2 (Updates = 2) N/a = 2 None = 2	Baseline = 1 Trend = 4 Project = 2 Implement. = 1 None = 4 N/a = 2	On-going = 5 By others = 2 In past = 3 None yet = 1 N/a = 2
Ave.	6.8 years	0.74 FTE Coord. /	---	---	---	---
Range	0.5 – 18 years	0.1 - 5.9 FTE/ effort	---	---	---	---

B. ADDITIONAL PARTICIPANTS IN THIS STUDY

Field Staff:

Department of Water Resources

Glen Pearson, Jerry Boles

Department of Fish and Game

Mark Wheatley, John Schwabe, Deborah Johnston, Bill Tippets, Mike Rugg, Allen Ruckman, Juan Fernandez, John Nelson, Jeff Cahn, Terry Palmisano, Dennis McEwan, Bill Cox

Department of Parks and Recreation

Mike Wells, Ray Patton

California Coastal Commission

Steve Monowitz

State Coastal Conservancy

Jack Liebster

Department of Forestry and Fire Protection

Eric Carr

C. JOINT TASK FORCE ON CALIFORNIA WATERSHED MANAGEMENT AND INTERAGENCY TEAM FINDINGS

SUMMARY OF JOINT TASK FORCE INPUT

- Landowners may or may not choose to participate in partnerships.
 - Landowners need to feel that process is truly inclusive of their needs in order to participate.
- Need clearinghouse for information and funding.
 - Many people spend a lot of time pursuing funding and information.
- Need better interagency coordination at watershed level.
 - Need a law that requires agencies to communicate; strong direction.
- Strong support for statewide watershed strategy (similar to Oregon document) – but be careful that it also has meaning “on the ground” and is not limiting in its prescriptions.
- State needs to provide funding for capacity building and organizational support if watershed partnerships are to be successful. (Policy portion of AB104 might provide a model.)
- Support for state developing manuals for watershed management. Recognize some of these are underway. Be sure to build on existing efforts and recognize diverse needs.
- Funding for monitoring is definitely a significant gap.
 - Long-term commitment of resources needed.
 - Possibility of a legislative trust fund for monitoring.

SUMMARY OF INTERAGENCY TEAM INPUT

- Support development of State Watershed Strategy.
 - Need very senior support (legislation or executive order) to really get all departments together.
 - Want CalTrans at the table.
- No state agency has a specific mandate to support these types of efforts for the long-term; however, in order to do the types of projects they want to do, agencies have to work at the watershed level or they will not get buy-in for their projects.
- Not enough staffing to participate on watershed partnerships.
 - State staff frequently volunteers their time.
 - No budget codes to charge their time to, but they see it as important so they do it anyway.
 - A lot of variation in how supportive mid-level managers are.
- Regional “council of councils” approach greatly facilitates agencies’ abilities to respond to needs of councils and partnerships.
 - These allow field staff to attend one regular meeting and have interactions with many grassroots efforts. (Examples include Santa Cruz County Blue Circle and Sacramento River Watershed Program)
- Agencies are willing to coordinate regional grants workshops once a year.
 - Purpose is to provide one stop shop for potential grant applicants tailored to each region.
- There is a need for a larger “cross-pollination” between watershed efforts around the state.
 - CalFed watershed work group fills some of need in CalFed area, no similar forum for areas outside the CalFed Solution area.
- There are no regional or statewide conferences on watershed management.
 - Needs for this may vary by region.
 - State could provide a model conference and help tailor it to each region.
 - This would allow agencies to interact, watershed partnerships to interact, etc.

- Initiating watershed projects requires judgment on when and how to become involved from state agency perspective.
 - Timing needs to be right.
 - Project needs to be able to be handed off gracefully to non-agency local leaders.
 - Most of time, agencies are and should be technical supporters, not initiators.

- State needs to sponsor a core set of classes: meeting effectiveness, strategic planning, how to develop good board members for 501(c)3, how government & media work, and other organizational topics.

- Monitoring of projects is largely unsupported by funding or staff at the State level.
 - Many state efforts underway but they need to be coordinated at a watershed level.

D. Additional State Programs with Watershed Emphasis

CONSERVANCIES

STATE COASTAL CONSERVANCY (SCC)

The State Coastal Conservancy provides grants and technical assistance to nonprofits, local governments, Resource Conservation Districts (RCD's), and other organizations for watershed planning, assessment, implementation projects, and monitoring. Several funding sources are available for these projects. The Conservancy is unusual among state agencies working in California's coastal watersheds in that it is a non-regulatory agency though it has a broad mandate to protect coastal resources through a variety of means. The SCC can foster its partners by providing funding, technical assistance and help to build capacity. The SCC assembles watershed projects with multiple purposes by melding natural resource protection, restoration, recreation and public access. The SCC has an excellent reputation for working with watershed practitioners in local watershed protection and restoration activities.

SANTA MONICA MOUNTAINS CONSERVANCY (SMMC)

The Santa Monica Mountains Conservancy is charged with the preservation and conservation of over a half million acres that constitutes the watershed of the Los Angeles/Ventura County Metropolitan region. The Conservancy acquires land for preservation and parkland, and through its joint powers authorities, protects, enhances and restores lands throughout the region. The Conservancy is involved in watershed management from planning through implementation. Staff of the SMMC is on the Board of Directors of the Los Angeles and San Gabriel Rivers Watershed Council and are key participants in the Santa Monica Bay Watershed restoration effort and in Calleguas Creek Watershed planning. The Conservancy recently participated on development of *Common Ground from the Mountains to the Sea: San Gabriel and Los Angeles Rivers Watershed and Open Space Plan* as well as the *Arroyo Seco Watershed Restoration Feasibility Study*.

COMMISSIONS

San Francisco Bay Conservation and Development Commission (BCDC)

San Francisco Bay Conservation and Development Commission is a State agency created by the California Legislature in 1965 in response to broad public concern over the future of San Francisco Bay and established to accomplish two primary goals: preventing unnecessary filling of San Francisco Bay and increasing public access to and along the Bay shoreline. BCDC has regulatory and planning authority over development in San Francisco Bay and along the Bay's nine-county shoreline and is responsible for carrying out two state laws –

the McAteer-Petris Act and the Suisun Marsh Preservation Act – and two plans, the *San Francisco Bay Plan* and the *Suisun Marsh Protection Plan*. These laws and plans were adopted to protect the Bay and the Suisun Marsh as significant natural resources for the benefit of the public and to encourage development compatible with this protection. The types of activities that require a permit include the placement of fill, dredging or other extraction of materials, any substantial change in the use of an area, and most development in the Suisun Marsh. As a State agency with authority and jurisdiction over Bay resources, the Commission can play an important role in maintaining and improving the quality of the Bay's waters and can best address watershed management through joint efforts and partnerships with other agencies and organizations.

CALIFORNIA COASTAL COMMISSION (CCM)

The mission of the California Coastal Commission is to provide for the balanced use of the coastal zone and to protect, restore, and enhance coastal and marine resources for the continuing benefit of current and future generations. The Commission has been developing water quality expertise over the last decade and in cooperation with the State Water Resources Control Board (SWRCB) is implementing The Plan for California's Nonpoint Source Pollution Control Program (California NPS Plan). While the Commission staff is committed to planning on a watershed scale, in practice, much of the effort occurs at the scale of individual development projects. When watershed-scale planning occurs in the coastal zone, Commission staff takes the opportunity to comment on major policy documents. Commission staff reviews the amendments for watershed-scale planning efforts and nonpoint source pollution control practices that reflect the current knowledge of threats to water quality. Commission staff continues to look for ways to expand outreach on nonpoint source issues from state agencies to local agencies and then as resources allow to individual watershed groups.

D. EFFECTIVENESS OF WATERSHED PARTNERSHIPS

AS DOCUMENTED IN OTHER STUDIES

Research from other studies on the effectiveness of community-based, collaborative stakeholder partnerships reveals the following observations:

- ❖ These local efforts need to be evaluated in comparison to the success possible through other strategies, as a relative measure rather than an absolute one, since traditional approaches also have limitations. Compared to the “status quo condition” of non-collaboration, these partnerships usually (though not always) represent an improvement in coordination, understanding, satisfaction, and management actions. [Huntington & Sommarstrom 2000];
- ❖ Time is essential for success. Partnerships older than 48 months have usually achieved several benchmarks of success: agreements on proposed restoration projects, implementation of projects, and monitoring of projects’ effects. However, time does not guarantee success either, as based on the study of over 30 partnerships in California. [Leach, Pelkey & Sabatier 2000, 2001];
- ❖ Success with partnerships also requires interpersonal trust and availability of technical information and expertise. [Leach, Pelkey & Sabatier 2000, 2001];
- ❖ Satisfaction of the participants in the progress of their partnership effort is one measure of success. Participants in 118 western watershed initiatives generally view their efforts as being moderately successful and effective. [Kenney 2000, 2001];
- ❖ Stakeholder processes (often using consensus-based decisions) improve decisions over the status quo and add new information, ideas, and analysis, based on the review of 239 published case studies of stakeholder involvement in environmental decision-making. [Bierle 2000];
- ❖ Collaborative efforts foster a sense of responsibility, ownership and commitment. While not a panacea for all natural resource problems, they represent a positive potential for good to come from their efforts, based on 10 years of studies. [Wondolleck & Yaffee 2000];
- ❖ Failure to progress as a collaborative effort can be caused by the perception or reality of excessive control by an interest (e.g., governmental agencies, environmental advocates, resource users) or misunderstanding of the expectations of the effort, based on several case studies in California. [Woolley & McGinnis 1999; Thomas 1999];
- ❖ Better restoration projects result from good watershed planning processes and technically strong plans, based on evaluation of 14 watershed councils in the west. [Huntington & Sommarstrom 2000].

REFERENCES CITED, WITH ANNOTATIONS

Bierle, T.C. 2000. The Quality of Stakeholder-Based Decisions: Lessons from the Case Study Record. Resources for the Future, Disc. Paper 00-56. Wash. D.C., 39 p.

- ◆ Evaluated information on over 100 attributes of 239 published case studies of stakeholder involvement in many levels of environmental decision-making.

Born, S.M. and K.D. Genskow. 1999. Exploring the Watershed Approach: Critical Dimensions of State-Local Partnerships. The Four Corners Watershed Innovators Initiative Final Report. River Network, Portland OR. 56 p.

- ◆ Case studies of 3 collaborative watershed groups/ efforts in northern and central CA, plus California's state organizational and programmatic framework.

Department of Fish and Game Annual Report to Congress on the California Coastal Salmon Recovery Program for Fiscal Year 2000. September 2001.

Huntington, C. W. and S. Sommarstrom. 2000. An Evaluation of Selected Watershed Councils in the Pacific Northwest and Northern California. (3 parts). Prepared for Trout Unlimited and Pacific Rivers Council. Eugene OR. ([//www.pacrivers.org](http://www.pacrivers.org))

- ◆ 14 case studies of collaborative groups in region (2 in northern CA), based on field evaluations of projects, personal interviews, and materials produced.

Kenney, D.S., McAllister, S.T., Caile, W.H., and J.S. Peckham. 2000. The New Watershed Source Book: A Directory and Review of Watershed Initiatives in the Western United States. Natural Res.Law Center, Univ. of Colorado School of Law, Boulder CO. 460 p.

- ◆ 23 case studies (of inclusive and exclusive groups) in CA based on mailed survey.

Leach, W., Pelkey, N. and P. Sabatier. (in press). Making Watershed Partnerships Work: A Review of the Empirical Literature. *J. Water Resources Planning and Management*.

- ◆ A review of the studies in California and elsewhere in order to compare methodologies, enumerate "lessons learned", and suggest research to test the diverse set of hypotheses presently published.

Leach, W., Pelkey, N.W., and P. Sabatier. 2001. Keys to Success in Watershed Management Partnerships: Approach and Initial Results. pp. 101-116 In: Proceedings of the 8th Biennial Watershed Management Council Conference. (Nov. 27-30, 2000). U.C. Water Resources Center Report No. 101. Riverside CA.

- ◆ Identifies 8 types of partnership success based on case studies of 30 partnerships in California and Washington.

Leach, W., Pelkey, N.W., and P. Sabatier. (in press). Stakeholder Partnerships as an Emergent Form of Collaborative Policymaking: Evaluation Criteria Applied to Watershed Management in California and Washington. *J. Policy Analysis and Management*.

McGinnis, M.V. and J.T. Woolley. 2000. Changing California from Wastesheds to Healthy Watersheds: A Characterization of California Watershed Organizations and Activities. Ocean and Coastal Policy Center, Marine Science Institute, U.C. Santa Barbara. 57 p.

- ◆ Surveyed 217 individuals in 98 watershed groups (inclusive and exclusive) from 45 different watersheds through a mailed questionnaire (1998).

McGinnis, M.V., Woolley, J.T. and J. Gamman. 1999. Bioregional Conflict Resolution: Rebuilding Community in Watershed Planning and Organizing. *Environmental Management* 24(1):1-12.

- ◆ 6 case studies (of inclusive and exclusive groups) based on mailed survey to a random sample of participants in watershed organizations (Sacramento Basin & Santa Ynez).

Natural Resource Projects Inventory (NRPI). <http://www.ice.ucdavis.edu/nrpi/>

- On-line database that contains over 2000 natural resource and restoration projects in California. This database is georeferenced and can be queried by a variety of methods.

Redwood National and State Parks' Erosion Control Program on Private Lands
Redwood Creek, Humboldt County.

Sabatier, P., Pelkey, N., and W. Leach. (In progress.) Watershed Partnership Project. (<http://wpp.ucdavis.edu>). U.C. Davis. Davis CA.

- ◆ Personal interview survey of 20-30 knowledgeable people in each of ~35 partnerships in diverse hydrologic units (HUCs) in CA and 15-20 in WA.

Sohrakoff, Ivan. 1999. *The Benefits of Watershed Management: Water Quality and Supply*. Planning and Conservation League Foundation.

State Coastal Conservancy Five-year Capitol Outlay Plan. 2002-2003'

Thomas, C.W. 1999. Linking Public Agencies with Community-Based Watershed Organizations: Lessons from California. *Policy Studies Journal* 27(3):544-564.

- ◆ Case study analysis of California Biodiversity Council's attempt to establish a bioregional council in the Klamath Bioregion; highlights some of the fundamental tensions underlying the relationship between watershed organizations and public agencies.

Wondolleck, J. and S. Yaffee. 2000. *Making Collaboration Work: Lessons from Innovation in Natural Resource Management*. Island Press, Covelo CA. 277 p.

- ◆ Drawn on 10 years of research focused on how collaborative processes work.

Woolley, J.T. and M.V. McGinnis. 1999. The Politics of Watershed Policymaking. *Policy Studies Journal* 27 (3):578-594.

- ◆ 6 case studies (of inclusive and exclusive groups) based on mailed survey to a random sample of participants in watershed organizations (Sacramento Basin & Santa Ynez).

E. STATE PROGRAMS PROVIDING GRANT AND CONTRACT SUPPORT FOR WATERSHED PLANNING AND RESTORATION ACTIVITIES

The following matrix identifies major sources of grants and contract funds within the California Resources Agency and State Water Resources Control Board for activities by local agencies, landowners, or non-profits, such as watershed groups, that support watershed level planning, management and restoration. These include watershed-specific programs, other types of programs assumed to be consistent with watershed level goals and activities, and additional programs that include but are not limited to watershed activities.

Table 1 describes the Resources Agency and State Waters Resources Control Board watershed programs and fund sources.

Table 2 shows the amount of funding by program for five activity categories of watershed support (watershed assessment, planning, project implementation, monitoring and evaluation, and operational support for watershed groups).

Table 3 indicates the percent by program for each activity category. This information can be used to identify unmet needs, and to consider fiscal and administrative options for ensuring that different types of support are available over time as watershed protection efforts mature.

Table 1. Resources Agency and State Water Resources Control Board Program Funds for Watershed Grants and Contracts

State Programs with Significant Watershed Elements	Geographic Scope	Purpose	Grants and Contracts for Watershed Activities (FY 2000/01)	Status (Current and Next year funding source and amount)
CalFed Ecosystem Restoration Program	Sacramento and San Joaquin River watersheds, Suisun Bay, and North Bay Watersheds	Restoring bay-delta ecosystem habitats and function; priorities include salmon, salt marshes, riverine woodlands, and water quality.	\$100 M	Estimate having \$100M available is year for ecosystem restoration program priorities. Primary funding source Prop 204
CalFed Watershed Mgmt Program: SWRCB, DWR, CDF, DFG	Scope is CALFED Bay Delta program solution area	To provide financial and technical assistance for watershed activities that help achieve the mission and objectives of CALFED and to promote collaboration and integration among community based watershed efforts.	\$18 M	\$10 M Prop 13 and \$2.5 M General Fund for grants in 2001/02; \$2.5 M General funds for contracts in 2001/02. \$12-16 M likely next year. No federal funding yet 20- 30 year program.
Coastal Conservancy Southern CA Wetland Recovery Project	South coast: Santa Barbara to San Diego	Partnership of state and federal agencies working with local govt, business, and environmental community to acquire, restore, and enhance coastal wetlands & watersheds.	\$7 M	\$3 M in 2001/02 budget. Fourth year of funding (starting in FY 1998) that has averaged \$5 M/yr. Has draft strategy to seek \$200 M over a 10-year period.
Coastal Conservancy Watershed Projects	Coastal Watersheds	Watershed resource enhancement, habitat restoration, removal of barriers to fish passage, access to and along the coast, nonpoint source pollution, river parkways.	\$9 M	Multiple funding sources, including Prop 117, Prop 12, others.
DFG Fishery Restoration Grants Program	Coastal counties	To restore watershed, riparian and instream habitats for anadromous salmonids in coastal watersheds.	\$20.5 M	2001/02 - \$7 M Gen Fund (SB271), \$5 M Prop 13, and \$15 M federal grants; 2002/03 - \$7 M from 271 and \$5 M Prop 13
DOC Resource Conservation District Grants	Statewide	The grants are to provide assistance to RCDs for small on-the-ground projects, capacity -building, training, research to prepare for larger grants.	\$.120 M	These grants are part of baseline funding and will be available in 2002
DOC Watershed Coordinator Grants to RCDs	Statewide	Fund watershed coordinators to Resource Conservation Districts (RCDs).	\$2 M	Two year General Fund pilot project through 2002. No permanent funding.
DWR Urban Streams Restoration Program Grants	Statewide (urban areas)	Assist communities in reducing damages from stream bank and watershed instability and floods while restoring the environmental and aesthetic values of streams, and to encourage stewardship and maintenance of streams by the community.	\$2 M	\$10 M in Proposition 13 funds for 2002/3. Established in 1985.
Resources Agency Coastal Impact Assistance Program	Entire coast	Mitigation and enhancement for OCS related impacts, including capital improvements.	\$1.68 M (current yr only)	One-time funding (3 year duration); Largely project focused, though Resource Agency, projects support monitoring, education.

Resources Agency Coast Resources Grant Program	Coastal counties	Mitigate for OCS impacts and enhance coastal resources.	\$1.5 M	Last of five- year program. Awards have progressed over time from planning to more implementation. Effort to extend program under way.
Resources Agency For Sake of Salmon Coastal Watershed Coordinators	Coastal counties	Technical assistance to watershed groups.	\$0.23M	Funds three regional coordinators or "circuit riders".
SWRCB NonPoint Source 319(h)	Statewide	To reduce water quality impacts from nonpoint sources of pollution.	\$5.3M	Long term competitive grant program.
SWRCB Prop 13	Statewide, with 60% to six so CA counties	Watershed improvement and NPS.	\$20 M	\$220 M for yrs 2001 through 2003, providing almost \$80 M/yr. 60% goes to six southern CA counties.
SWRCB Prop 204	Delta tributaries	Grants for watershed projects in Delta Tributaries.	\$15M	One time. Will be completed by 2003.
SWRCB 205(j)	Statewide	To conduct water quality planning and assessments.	\$0.6M	\$.6 M in grants awarded annually in 205(j) grants.

Gaps:

- 1) East side watersheds;
- 2) Watershed level monitoring;
- 3) Comprehensive Watershed level assessment everywhere but North Coast;
- 4) Tech support from agencies to go with DFG coastal grants;
- 5) Capacity building everywhere but CALFED.

Table 2. Funding by Five Categories of Watershed Activities (Fiscal Year 2000/01 As Base Year) (In \$ Millions)

State Programs with Significant Watershed Elements	Total Program Funds (\$M)	FY 2000/01 Funding for Watershed Grants and Contracts		Amount of Grant/Contract Watershed Funding by Activity (2000/01)					
		Percent Total Program (%)	Approximate Amount (\$M)	Assessment (\$M)	Planning (\$M)	Implementation (\$M)	Monitoring/Evaluation (\$)	Outreach/Education (\$M)	Operational Support for Watershed Groups (\$M)
LEGEND									
1 - Current budget year only									
2 - Calculated using percentages from chart 3									
3 - Planning & assessment lumped together; both must relate to proposed projects									
4 - Total is not equal to sum of categories because other watershed activities, such as research, are funded									
5 - Less than 100% because other watershed activities, such as research, are funded									
CalFed Watershed Mgmt Program: SWRCB, DWR, CDF, DFG	20.00	90%	18.000	2.302	4.826	3.166	0.974	3.250	2.263
Coastal Conservancy's Southern CA Wetland Recovery Program	7	?	7	.313	2.09	4.2	.287	.24	INA
Coastal Conservancy Watershed Projects - Salmonid Recovery (Does not include nonpoint source or river parkway projects.)	25	NA	7.5	1.88	³	5.45	Monitoring is built in to capital projects	Only as part of overall project	Only as part of overall project
DFG's SB 271 and Prop 13 Fishery Restoration Grants Program	20.50	100%	20.459	1.734	1.548	11.961	0.878	0.891	1.836
DOC Resource Conservation District Grants	0.12	100%	0.120	0.004	0.000	0.078	0.018	0.019	0.000
DOC Watershed Coordinator Grants to RCDS	2.00	100%	2.000	-	-	-	-	-	2.000
DWR Urban Streams Restoration Program Grants ³	2.00	100%	2.000	0.000	0.400	1.300	0.100	0.200	INA
Resources Agency Coastal Grant Program	3.10	48%	1.500	-	0.200	1.300	-	-	-
Resources Agency Coastal Impact Assistance Program ¹	15.40	11%	1.680	0.750	0.125	0.100	0.500	0.880	?
Resources Agency FSOS Coastal Watershed Coordinators	0.23	100%	0.230	0.000	0.000	0.000	0.000	0.000	0.230
SWRCB Nonpoint Source	19.10	50%	5.300	0.000	0.000	5.300	0.000	0.000	0.000

Program (NPS)									
SWRCB Prop 13	9.40	100%	9.400	0.100	2.000	17.000	0.000	0.000	0.000
SWRCB Proposition 204	15.00	100%	15.000	0.000	0.000	15.000	0.000	0.000	0.000
SWRCB 319(h)	5.50	100%	5.500						
SWRCB 205(j)	1.00	60%	0.700	0.000	0.000	0.600	0.000	0.000	0.000
Totals ⁴	125.35		88.889	5.204	11.190	59.996	2.757	5.475	6.329
Percent of total watershed funding by six categories ⁵				6%	13%	67%	3%	6%	7%

Table 3. Percentage of Watershed Funds by Program for Category of Watershed Activity

State Programs with Significant Watershed Elements		Percent of Grant/Contract Watershed Funding by Activity					
Legend: 1 - Current Year Budget 2 - Based on % projects funded by 9/19/01 3 - Planning and assessment lumped together; both must relate to proposed projects.	Amount (in \$ millions)	Assessment	Planning	Implementation	Monitoring/Evaluation	Outreach/Education	Operational Support for Watershed Groups
CalFed Watershed Mgmt Program	20.0	13%	27%	18%	5%	18%	13%
Coastal Conservancy's Southern CA Wetland Recovery Program	7.0	2 4.5%	29.9%	59.9%	4.1%	0.3%	INA
Coastal Conservancy Watershed Projects	5.0	INA	INA	INA	INA	INA	INA
DFG's SB 271 and Prop 13 Fishery Restoration Grants Program (DFG)	20.5	8.5%	7.6%	58.5%	4.3%	4.4%	9.0%
DOC Resource Conservation District Grants	0.1	0.036%	0.0%	65.0%	15.0%	16.0%	0.0%
DOC Watershed Coordinator Grants to RCDS	2.0	0	0%	0%	0%	0%	100%
DWR Urban Streams Restoration Program Grants	2.0	3 -	20%	65%	5%	10%	INA
Resources Agency Coastal Grant Program	1.5	0%	13%	87%	0%	0%	0%
Resources Agency Coastal Impact Assistance Program	1.7	1 5%	7%	6%	30%	52%	INA
Resources Agency FSOS Coastal Watershed Coordinators	0.2	0%	0%	0%	0%	0%	100%
SWRCB Nonpoint Source Program (NPS) 319h	5.3	0%	0%	100%	0%	0%	0%
SWRCB Prop 13	20.0	5%	10%	85%	0%	0%	0%
SWRCB Proposition 204	15.0	0%	0%	100%	0%	0%	0%
SWRCB 205(j)	0.6	0%	100%	0%	0%	0%	0%

F. MAPS OF OTHER WATERSHED PARTNERSHIPS/ORGANIZATIONS

These maps were created using the Regional Water Quality Control Board Regions, 2m hydrography layer, participant lists of CRMPs, Watershed Groups from For Sake of the Salmon, and UC Davis's Watershed Partnership Study.

Locations for the groups were plotted using 'place names' GIS coverages merged with spreadsheets of the CRMP and FSOS lists. These lists may be inaccurate.

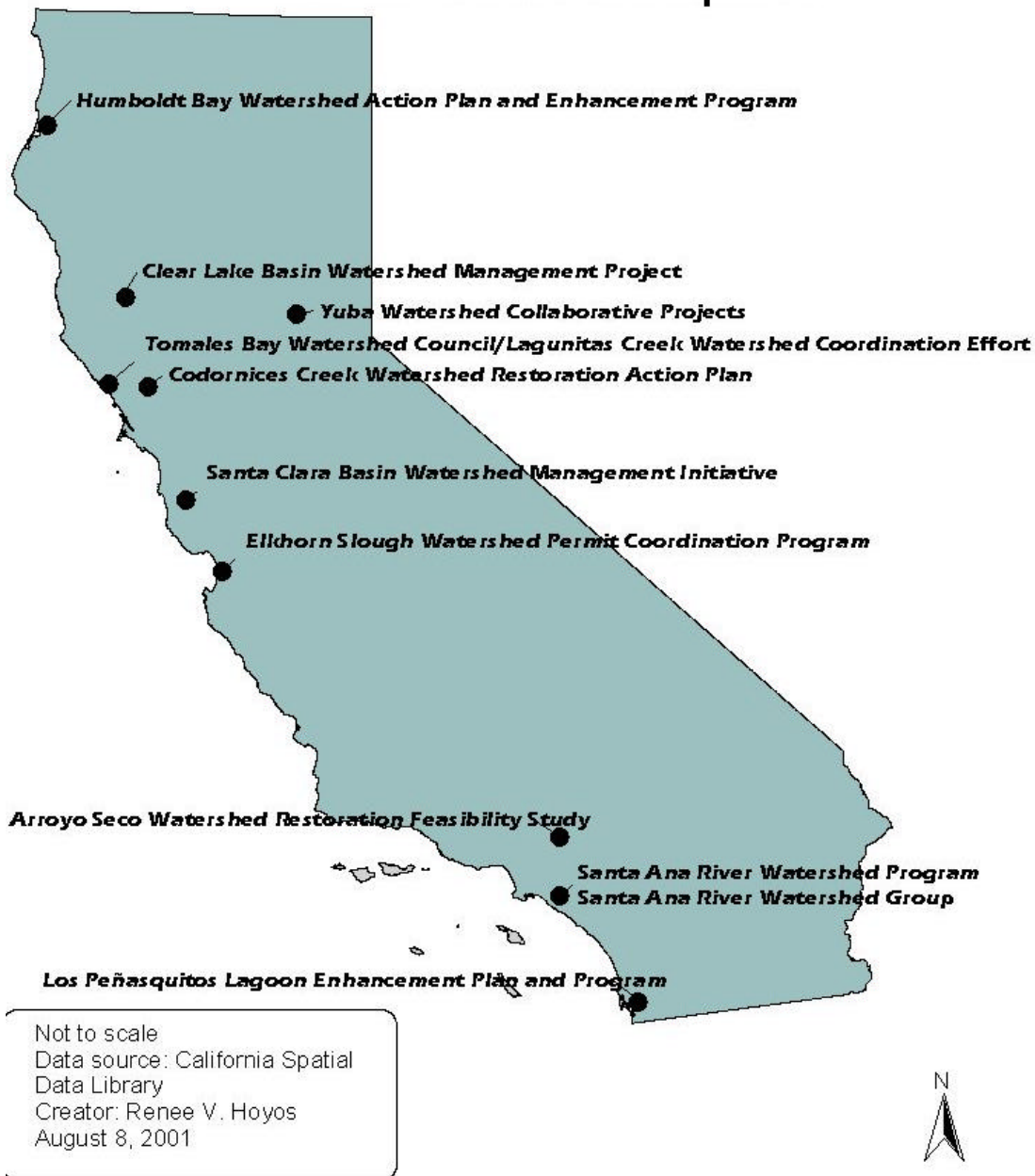
Maps were created by Renée Victoria Hoyos and Adam Henderson.

Thanks to Joshua Viers, Joshua Johnson, Chad Shook and Mike Byrne of the Information Center for the Environment (ICE) and Fiona Renton of the SWRCB for providing coverages.

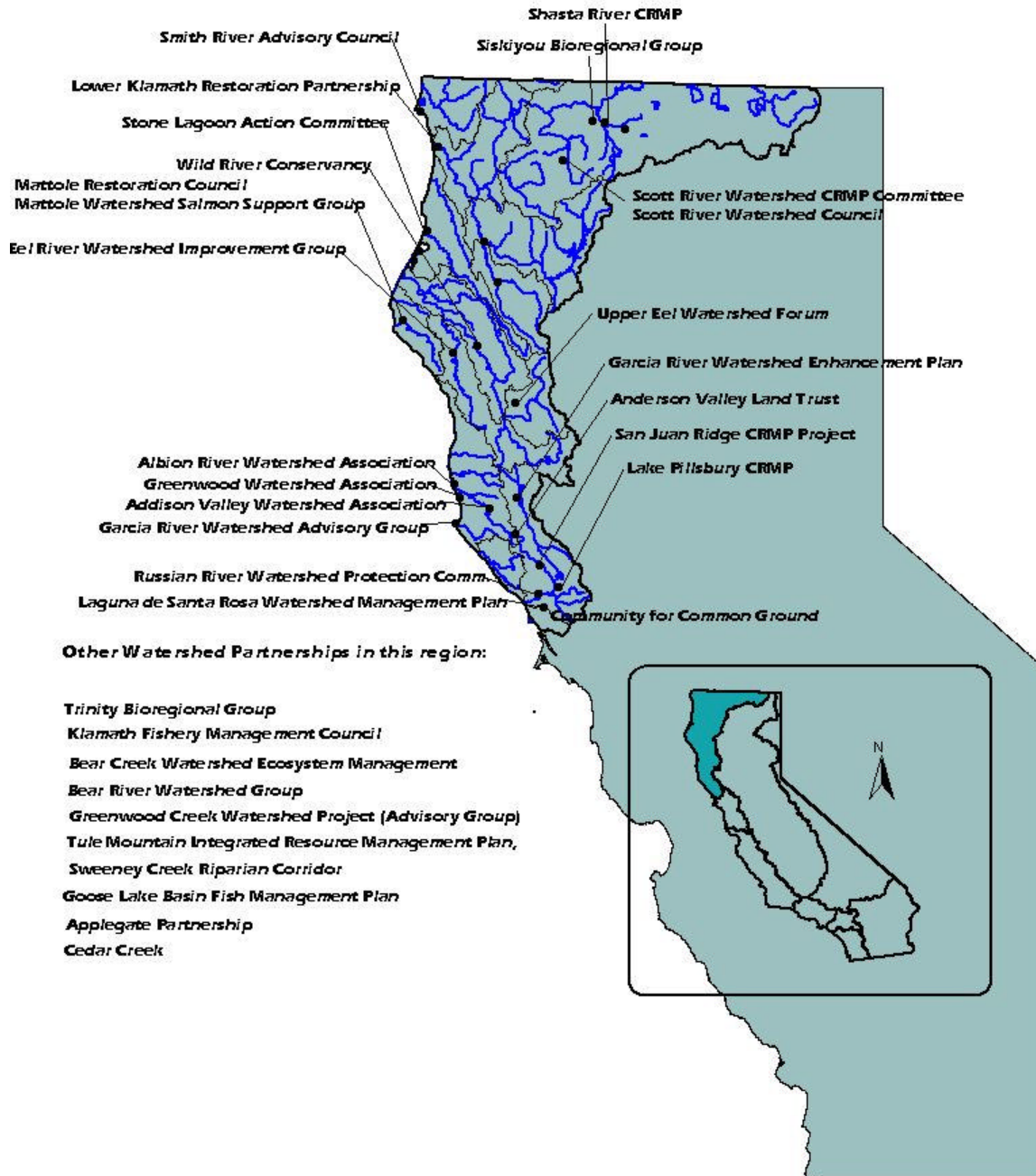
Thanks to DWR graphics for final map layout.

Special Thanks to Adam Henderson of Department of Water Resources for assistance with map creation.

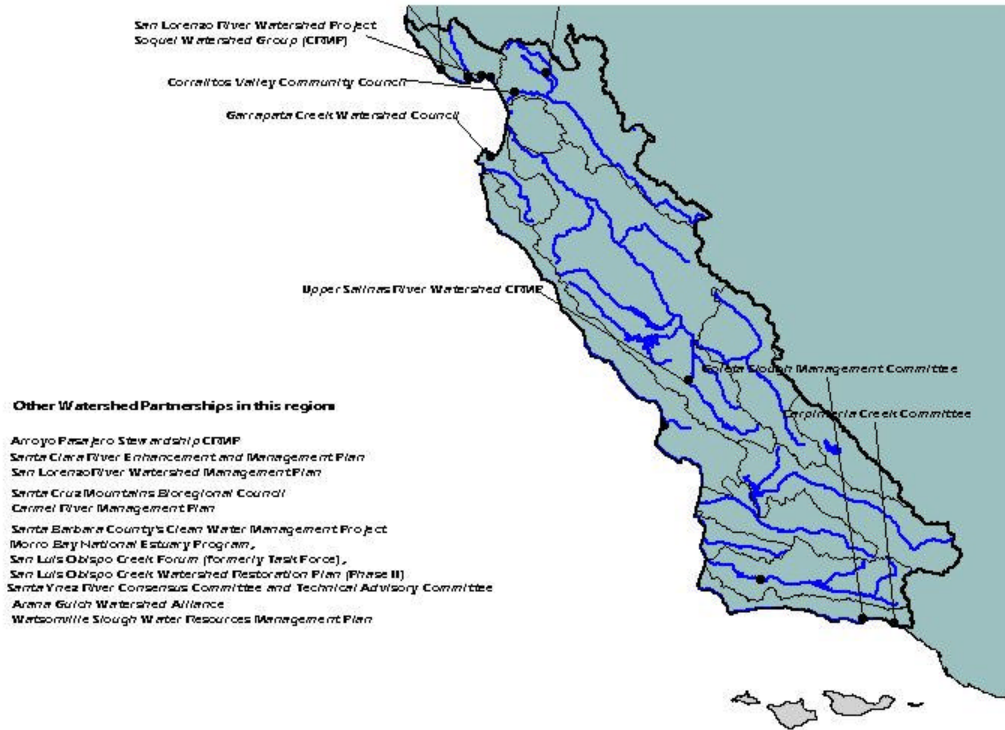
Locations of the 10 Case Studies found in this report



Watershed Partnerships in the Northern Region

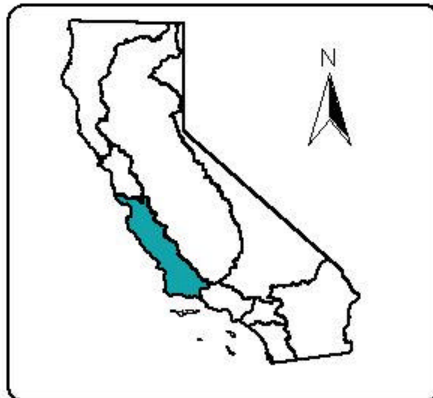


Watershed Partnerships in the Central Coast

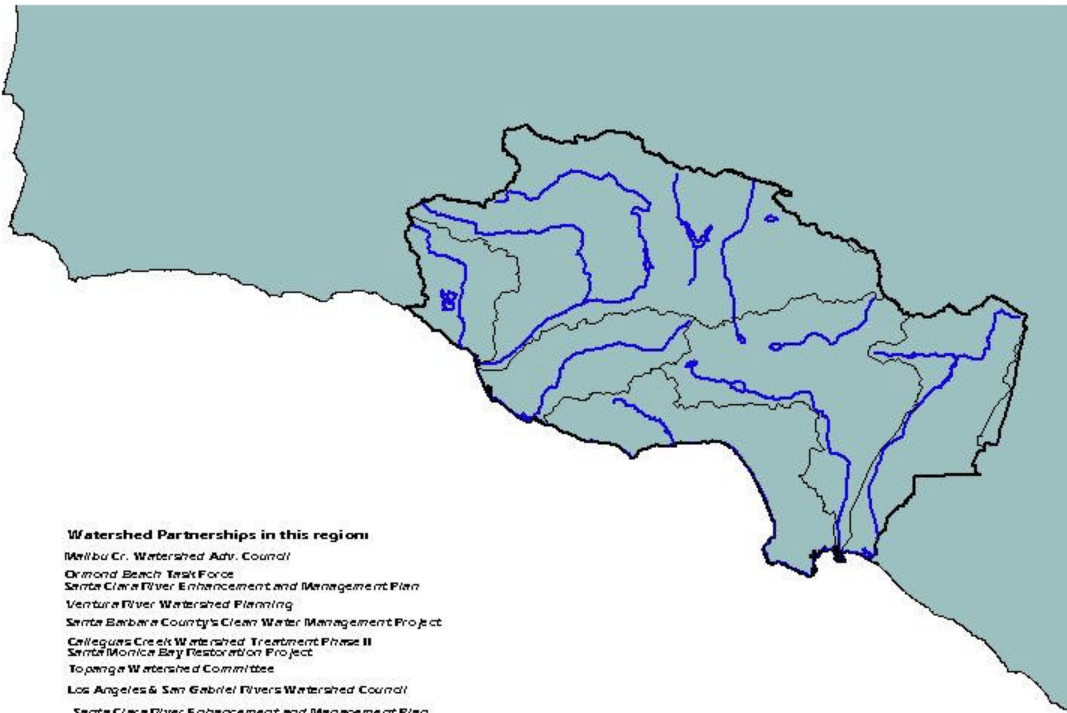


Other Watershed Partnerships in this region

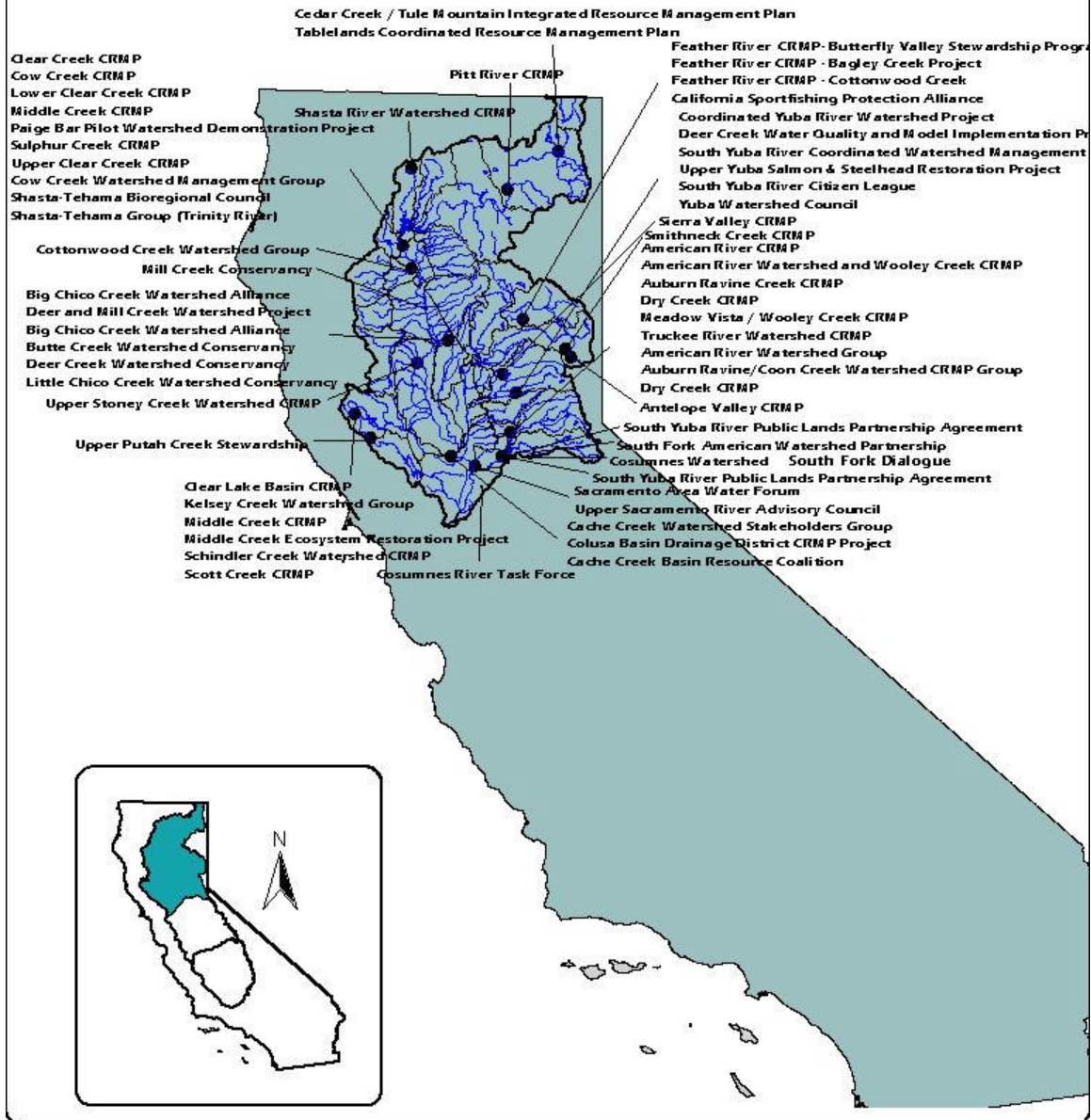
- Arroyo Pasaferro Watership CFRMP
- Santa Clara River Enhancement and Management Plan
- San Lorenzo River Watershed Management Plan
- Santa Cruz Mountains Bioregional Council
- Carmel River Management Plan
- Santa Barbara County's Clean Water Management Project
- Morro Bay National Estuary Program
- San Luis Obispo Creek Forum (formerly Task Force)
- Santa Ynez River Watershed Restoration Plan (Phase II)
- Santa Ynez River Consensus Committee and Technical Advisory Committee
- Anna Gulch Watershed Alliance
- Watsonville Slough Water Resources Management Plan



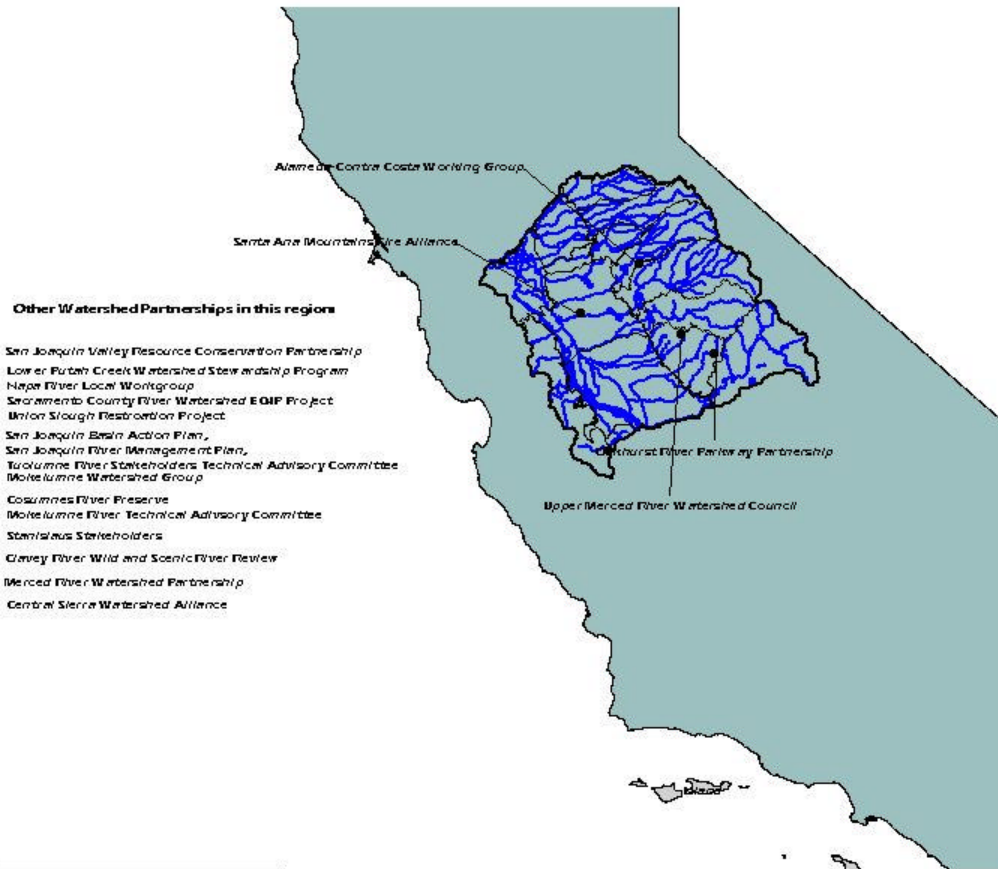
Watershed Partnerships in the Los Angeles Area



Watershed Partnerships in the North Central Valley Region



Watershed Partnerships in the Central Central Valley

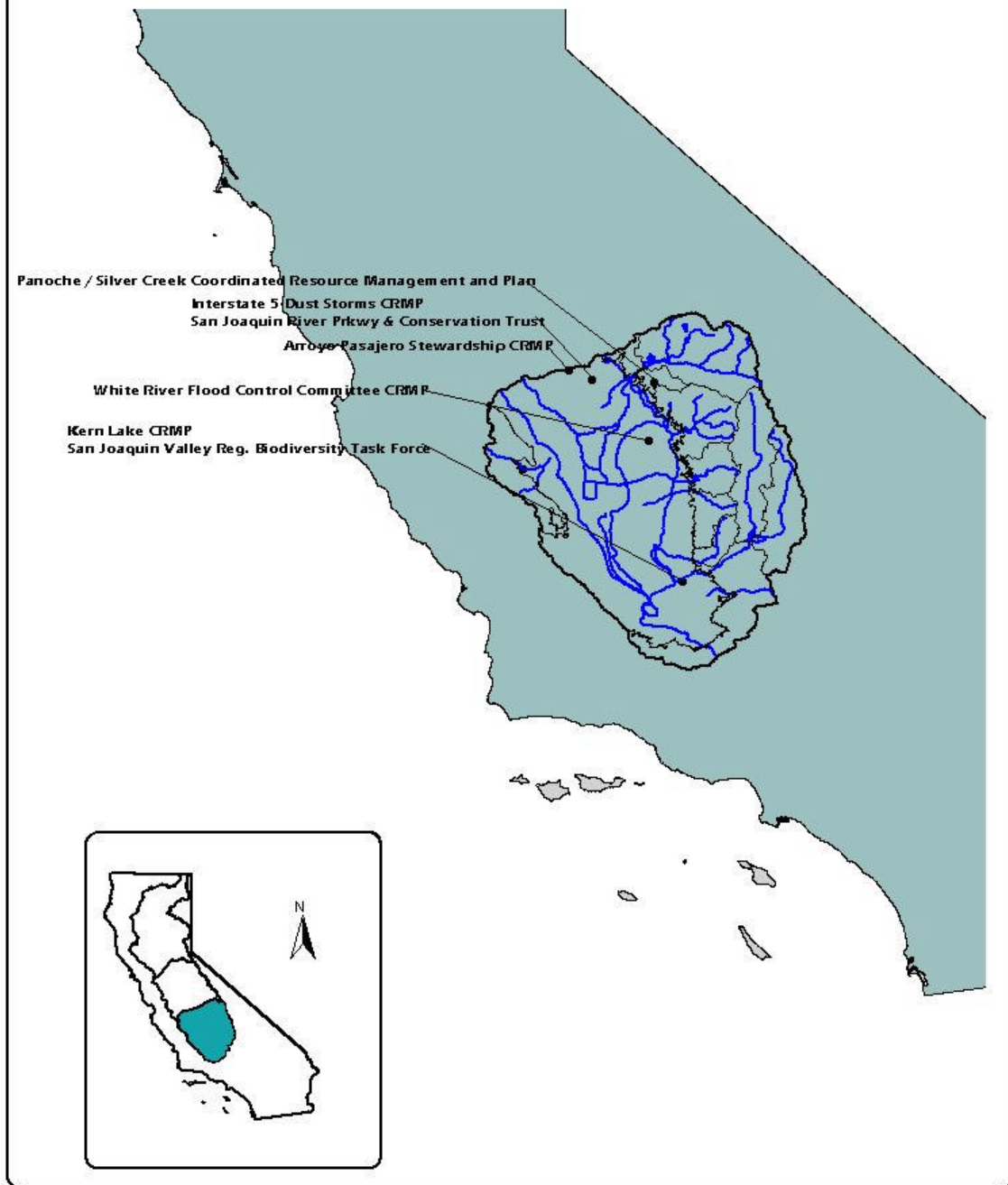


Other Watershed Partnerships in this region

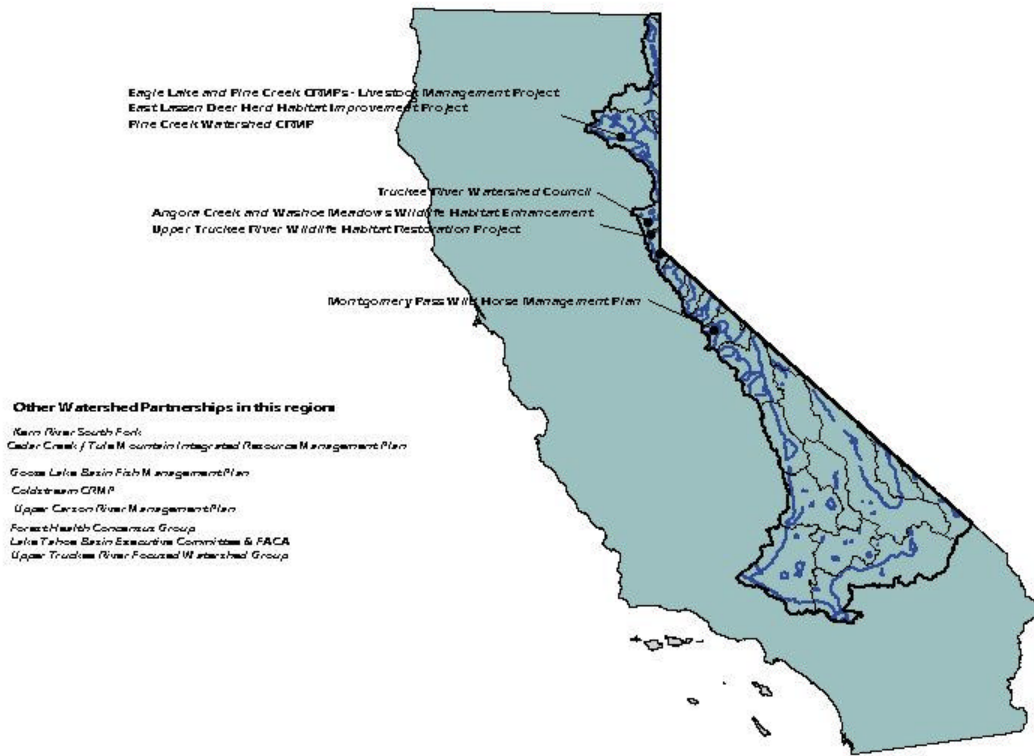
- San Joaquin Valley Resource Conservation Partnership*
- Lower Putah Creek Watershed Stewardship Program*
- Napa River Local Workgroup*
- Sacramento County River Watershed EOHIP Project*
- Union Slough Restoration Project*
- San Joaquin Basin Action Plan,*
- San Joaquin River Management Plan,*
- Tuolumne River Stakeholders Technical Advisory Committee*
- Mokelumne Watershed Group*
- Cosumnes River Preserve*
- Mokelumne River Technical Advisory Committee*
- Stamulus Stakeholders*
- Gravey River Wild and Scenic River Review*
- Merced River Watershed Partnership*
- Central Sierra Watershed Alliance*

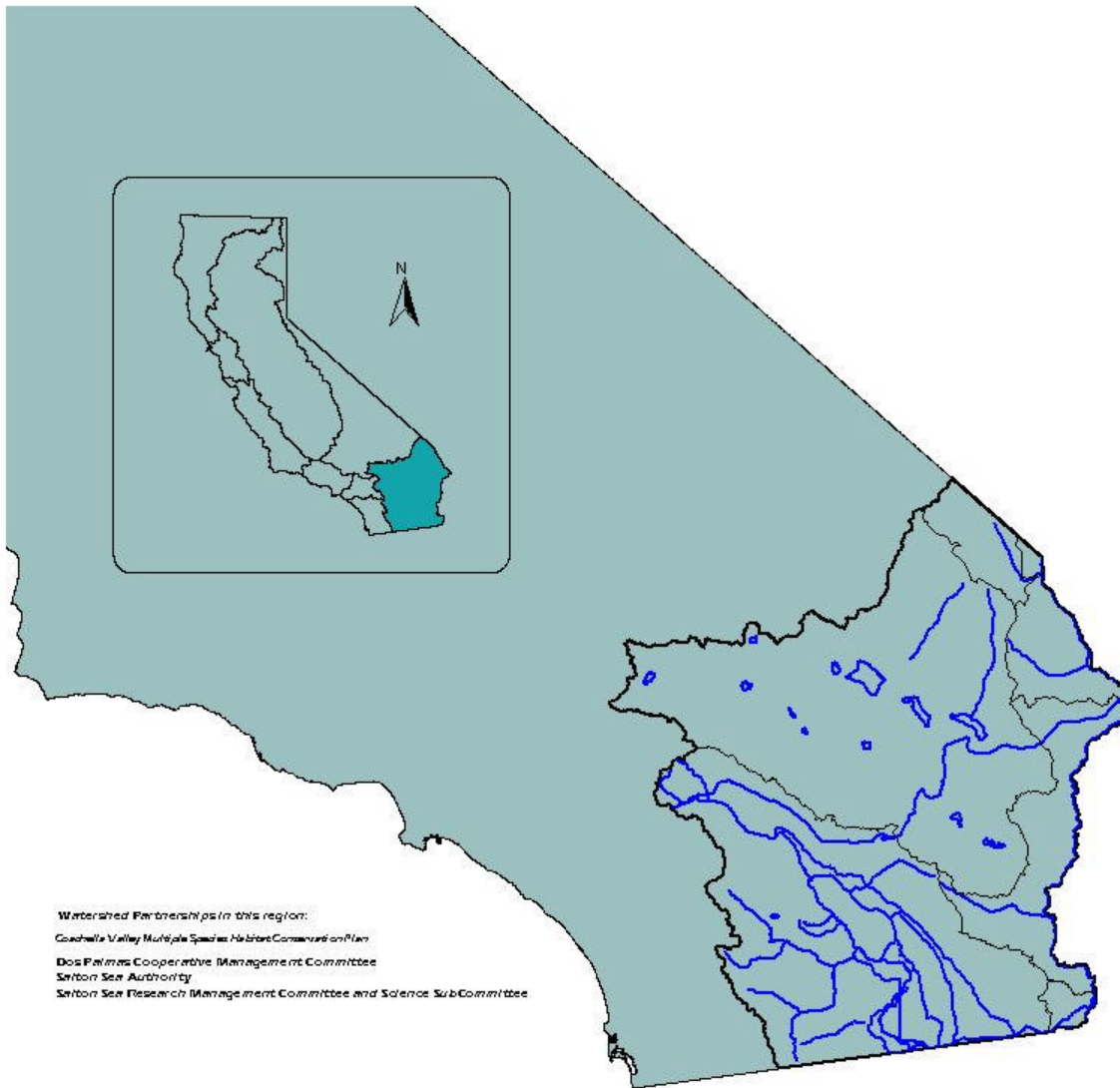


Watershed Groups in the Southern San Joaquin Valley

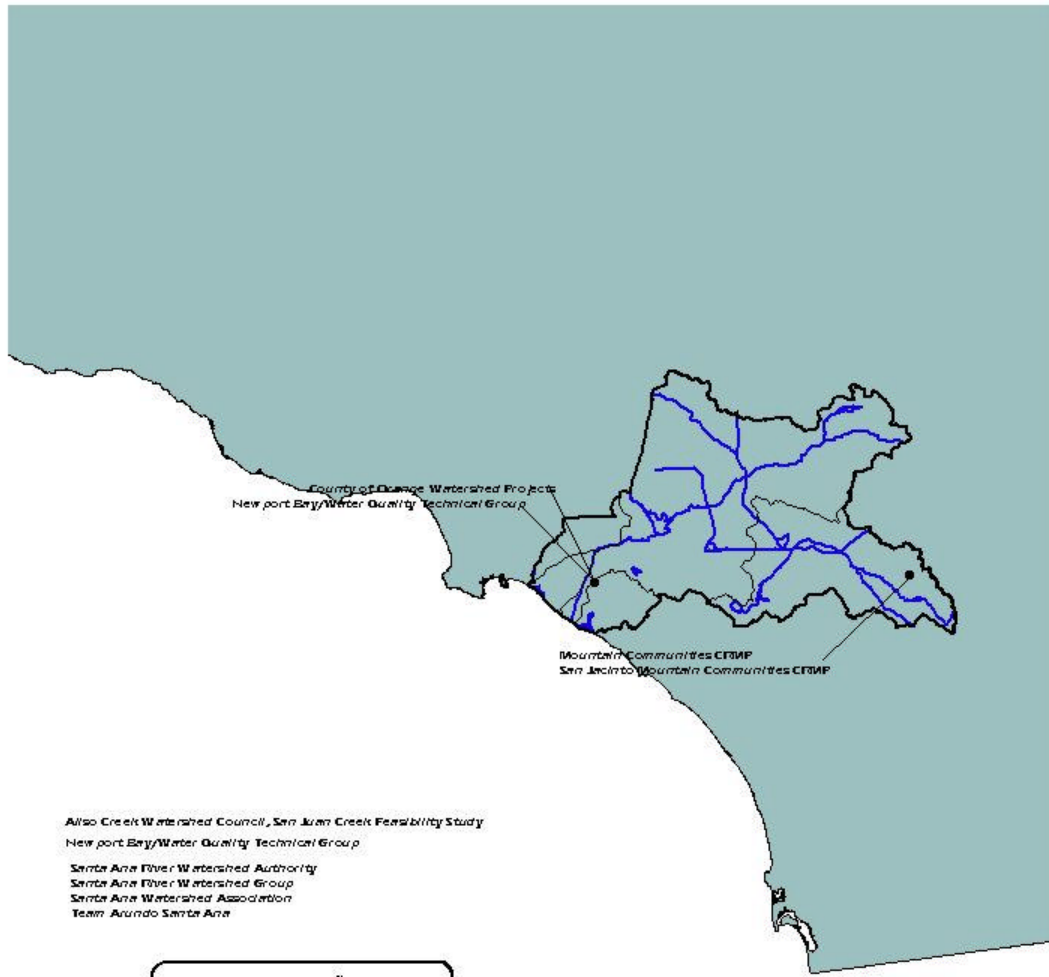


Watershed Partnerships in the Eastern Sierra Region

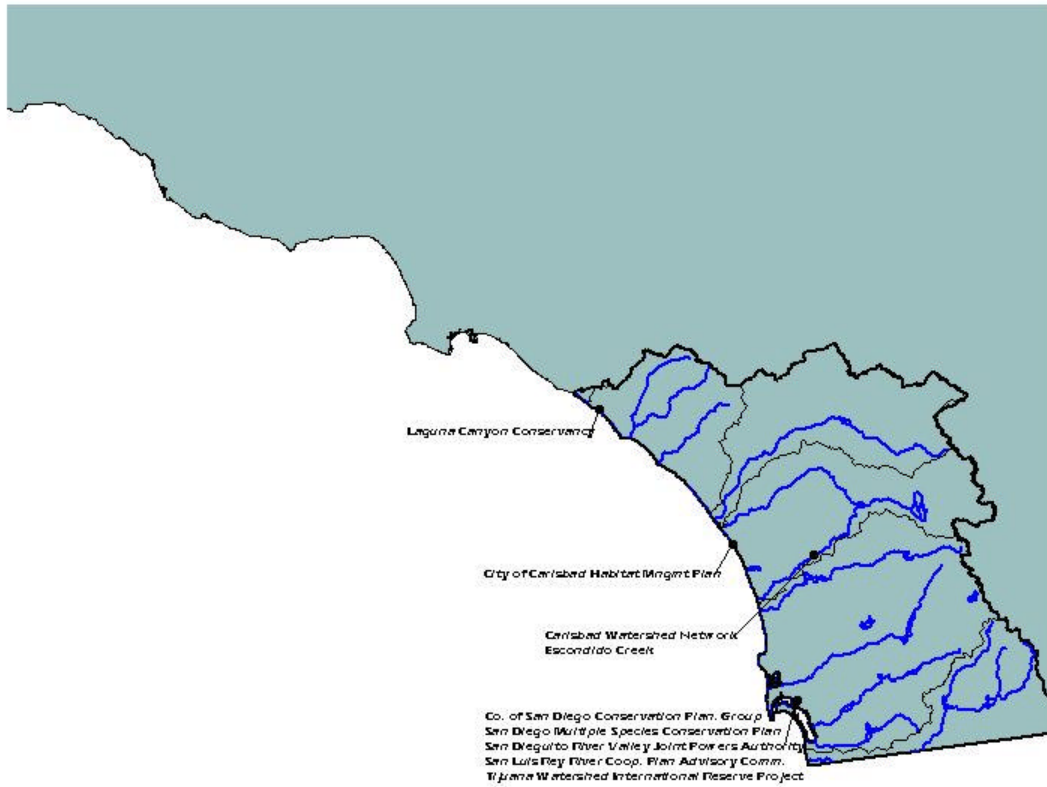




Watershed Partnerships in the Santa Ana Region



Watershed Partnerships in the San Diego Region



- Los Peñasquitos Lagoon Enhancement Project
- Santa Margarita River Watershed Program
- Upper Santa Margarita River Resource Management Plan for Suburban/Wildland Boundaries
- Aliso Creek Watershed Council, San Juan Creek Feasibility Study
- San Luis Rey Watershed Council
- San Diego Bay Watershed Taskforce

