Attachment 3
Work Plan

PAGE LEFT INTENTIONALLY BLANK

Contents

Section 1.0 Background Information 1-1

1.1 Upper Santa Margarita Planning Area Regional Water Management Group (RWMG) 1-1

1.2 The San Diego Funding Area 1-2

1.2.1 Tri-County FACC 1-3

1.2.2 Competing Interests 1-4

1.3 The Santa Margarita Watershed 1-4

1.3.1 Upper Santa Margarita Planning Area Boundary 1-5

1.3.2 Upper Santa Margarita Planning Area Water Management 1-6

1.3.3 Upper Santa Margarita Watershed Water Quality, Biological Resources, Land Use, and Economic Conditions 1-15

1.4 The Upper Santa Margarita IRWM Plan 1-17

Section 2 The Public Process 2-1

2.1 Public Outreach 2-1

2.1.1 Stakeholder Identification, Coordination, and Participation 2-1

2.1.2 Outreach to Disadvantaged Communities and Tribal Communities 2-6

2.2 Stakeholder Advisory Committee 2-7

Section 3 IRWM Plan Development 3-1

3.1 Collaborative Water Management Portfolio 3-1

3.2 Regional Water Conflicts 3-2

3.2.1 Rancho California Water District 3-3

3.2.2 Anza-Aguanga Area 3-4

3.3 Regional Priorities 3-4

3.3.1 Short Term 3-5

3.3.2 Long Term 3-5

3.4 Data and Technical Analysis 3-6

3.4.1 Data Collection 3-6

3.4.2 Data Management 3-7

Section 4 IRWM Plan Implementation 4-1

4.1 Implementing IRWM Plan Activities 4-1

4.2 Employing Integrated Resource Management Strategies 4-2

4.3 Impacts and Benefits of Plan Implementation 4-3

4.3.1 Benefits of Integration and Future Projects 4-5

4.3.2 Impacts to Environmental and Other Resources 4-5

4.4 Meeting Current IRWM Plan Standards 4-6

Section 5 Work Plan Content 5-1

5.1 Task 1 – Ongoing Outreach and Coordination 5-1
5.1.1 Sub-Task 1A: Regional Acceptance Process 5-1
5.1.2 Sub-Task 1B: Previous Outreach and Coordination....5-1
5.1.3 Sub-Task 1C: Public Workshops, Website Maintenance, E-newsletters 5-2
5.1.4 Sub-Task 1D: Meetings and Coordination with the Tri-County FACC and Tri-County FACC Overlay Subcommittee....5-2
5.1.5 Sub-Task 1E: Outreach to Tribal Communities....5-3
5.1.6 Sub-Task 1F: Outreach to Disadvantaged Communities....5-3
5.1.7 Sub-Task 1G: Outreach to Other Stakeholders 5-3
5.2 Task 2 - Updating the Santa Margarita Watershed IRWM Plan 5-4
5.2.1 Sub-Task 2A: Governance and Stakeholder Involvement....5-4
5.2.2 Sub-Task 2B: Region Description....5-5
5.2.3 Sub-Task 2C: Objectives and Plan Performance/Monitoring....5-6
5.2.4 Sub-Task 2D: Resource Management Strategies....5-6
5.2.5 Sub-Task 2E: Integration, Project Development, and Review Process....5-7
5.2.6 Sub-Task 2F: Impacts and Benefits 5-7
5.2.7 Sub-Task 2G: Data Management....5-7
5.2.8 Sub-Task 2H: Finance 5-8
5.2.9 Sub-Task 2I: Relation to Local Water and Land Use Planning 5-8
5.2.10 Sub-Task 2J: Coordination with Tri-County Funding Area Coordinating Committee....5-8
5.2.11 Sub-Task 2K: Climate Change 5-9
5.2.12 Sub-Task 2L: Incorporating Special Studies 5-10
5.3 Task 3 - Salt and Nutrient Management Plan 5-11
5.3.1 Sub-Task 3A: Conduct Initial Basin Characterization....5-13
5.3.2 Sub-Task 3B: Identify and Quantify Salinity/Nutrient Sources....5-14
5.3.3 Sub-Task 3C: Develop Plan for Supplemental Monitoring 5-14
5.3.4 Sub-Task 3D: Assess Salinity/Nutrient Management Strategies 5-15
5.3.5 Sub-Task 3E – Assess Plan Effectiveness 5-16
5.4 Task 4 - Anza-Aguanga Groundwater Study Planning - Phase I 5-17
5.4.1 Sub-Task 4A: Gather and Evaluate Available Data....5-18
5.4.2 Sub-Task 4B: Collect Drill Cuttings and Geophysical Logs 5-18
5.4.3 Sub-Task 4C: Compile Geotechnical Data 5-18
5.4.4 Sub-Task 4D: Report Preparation....5-19
5.5 Task 5 – San Mateo Habitat Improvements 5-19
5.5.1 Subtask 5A: Education of Homeowners Associations (HOA) and Home Owners on Ponds 5-19
5.5.2 Subtask 5B: San Mateo Invasive Species Removal 5-20
5.6 Task 6 – Task Administration and Reporting to DWR 5-20
5.6.1 Sub-Task 6A: Task Administration....5-20

List of Tables

Table 1 Public Workshop Schedule 2-3
Table 2 E-Newsletter Publication 2-5
Table 3 Upper Santa Margarita Planning Area IRWM Plan Stakeholder Advisory Committee 2-7
Table 4 Benefits of IRWM Plan Implementation 4-3

List of Figures

Figure 1 Upper Santa Margarita Planning Region 1-7
Figure 2 Land Managers and Jurisdictions in the Upper Santa Margarita Watershed Planning Region 1-11
Figure 3 Water Districts in the Upper Santa Margarita Watershed Planning Region 1-13
Figure 4 Implementation Framework 4-2

PAGE LEFT INTENTIONALLY BLANK

Section 1.0
Background Information

This section addresses the following points for discussion found on page 15 of the IRWM Grant Program PSP for Planning Grants:

- *The Regional Water Management Group (RWMG)*
- *The region*
- *The existing or partially completed IRWM Plan*
- *Present foundation for the efforts funded under the grant request*

1.1 Upper Santa Margarita Planning Area Regional Water Management Group (RWMG)

An Integrated Regional Water Management (IRWM) Plan was developed and adopted in July 2007 for submission to the California Department of Water Resources (DWR) for Proposition 50 grant funds. During development of the IRWM Plan, a regional governance structure was established to bring together a regional water management group (RWMG) with authority for planning and implementation of water management strategies in the Upper Santa Margarita Watershed. The following three agencies form the RWMG:

- Rancho California Water District (RCWD);
- Riverside County Flood Control and Water Conservation District (RCFC); and
- County of Riverside.

In June and July 2007, RCWD, RCFC, and the County of Riverside signed a Memorandum of Understanding (MOU) by which the three agencies agreed to cooperate and work collaboratively with other stakeholders in the Upper Santa Margarita Watershed in Riverside County toward the completion of the IRWM Plan. The MOU identifies RCWD as the lead funding and contracting agency for planning, applying for funding, and implementing funded efforts on behalf of Western and Eastern Municipal Water Districts and throughout the planning area. The MOU was adopted by the County of Riverside Board of Supervisors and Riverside County Flood Control and Water Conservation District on June 26, 2007. Rancho California Water District adopted the MOU on July 12, 2007. By taking this action, these three agencies have committed resources and funding to work collaboratively with the stakeholders of the watershed to develop an IRWM plan and to support its implementation.

The MOU directs the General Manager or Chief Executive of each agency as responsible for reviewing and approving the Integrated Regional Water Management Plan ; approving and executing documents; submitting applications to the State, contracting to accept grants funds and disburse funds to grantees; and making

changes as needed to contracts or other documents needed to implement the IRWM Plan process.

The MOU further provided for a Stakeholder Advisory Committee (SAC) and the SAC Organizing Statement. Members of the committee include individuals representing public agencies and stakeholder organizations throughout the Upper Santa Margarita Planning Area. The SAC will continue to play an instrumental role in the implementation of the IRWM Plan.

On August 31, 2010, an updated MOU was signed by the RWMG agencies to extend the geographic boundaries of the Upper Santa Margarita Watershed to include areas that were previously not included; extend the expiration date from December 31, 2010 to December 31, 2015; and allow applications to be made by RCWD for Proposition 84 and future funding sources. All other terms of the updated MOU are consistent with the original MOU. The updated MOU will be added to the IRWM Plan as part of the IRWM Plan Update Task 2 (See Section 5.2).

1.2 The San Diego Funding Area

The San Diego Funding Area boundary mirrors that of the San Diego Regional Water Quality Control Board (RWQCB) boundary. It comprises approximately 3,900 square miles in the southwestern corner of California.

The San Diego Funding Area encompasses most of San Diego County and parts of southwestern Riverside County and southern Orange County. The northern boundary lies in Orange County and is the hydrologic divide that extends from the ridge of the Elsinore Mountains to the coast north of Laguna Beach. The southern boundary is the United States – Mexico international border. The eastern boundary extends northerly along the hydrologic divide formed by the Laguna, Cuyamaca, Palomar, and Santa Ana Mountains located in the Cleveland National Forest. The western boundary parallels the coastline and extends north-south approximately 85 miles to the international border.

The 85 miles of coastline include the Pacific Ocean and various bays, harbors, coastal lagoons, estuaries, and river mouths. The natural water resources in the San Diego Funding Area can be classified as inland surface waters, ground waters, and coastal waters. The San Diego RWQCB Basin Plan identifies the beneficial uses of and water quality objectives for the waters in this region.

Most of the streams in the San Diego Funding Area are interrupted in character, with both perennial and ephemeral components due to variable precipitation patterns and the construction of surface water impoundments. Many of the major surface water impoundments contain a blend of natural runoff and imported water, and may be supplemented by reclaimed water.

The major hydrologic units in the San Diego Funding Area contain groundwater basins, developed mostly for municipal and agricultural supply purposes. The basins are

relatively small in area and generally shallow. Because of the movement of groundwater to the surface and the movement of surface water into the ground, pollutants present in groundwater may be transported into surface waters and vice versa.

Land uses in the lower portions of the watersheds often differ from those in the upper watersheds. This difference in land use can translate into differences in water quality and beneficial use problems.

During the Proposition 50 - Chapter 8 IRWM planning period, the Upper Santa Margarita Watershed was excluded from the San Diego IRWM Plan. As a result, RCWD took the lead with the County of Riverside and the Riverside County Flood Control and Water Conservation District to develop an IRWM Plan for the upper portion of the Santa Margarita Watershed. The intent of the Upper Santa Margarita Watershed IRWM Plan is to pave the way for greater watershed-wide coordination and management of water resources within the Santa Margarita Watershed as a whole, as well as adjoining watershed and regional planning and funding efforts.

1.2.1 Tri-County FACC

In an unprecedented attempt to improve inter-regional cooperation and efficiency, the Tri-County FACC was formed to foster long-term commitment in coordinating watershed efforts within the funding area. One example of how the Tri-County FACC collaboration is the work of the Overlay Committee where planning grant requests, matched with local funds and in-kind contributions have been coordinated to improve water quality, groundwater management, invasive removal, stream and ecosystem health, and forest land management.

During the regional acceptance process (RAP), governance among the planning areas in the San Diego Funding Area was developed to enhance IRWM planning, particularly in watershed areas that extend beyond the planning boundaries of the Upper Santa Margarita Watershed. In February 2008, the three planning regions representing the San Diego Funding Area formed the Tri-County FACC to balance the necessary autonomy of each planning region to plan for itself at the appropriate scale with the need to coordinate among ourselves to ***improve inter-regional cooperation and efficiency***. In addition, the Tri-County FACC allows for coordination of opportunities to ***integrate water management activities related to natural and man-made water systems, including water supply, reliability, water quality, environmental stewardship, and flood management***. The Tri-County FACC identifies cooperation opportunities and allows sharing of information. The Tri-County FACC members determined an equitable allocation of funding designated for the San Diego Funding Area that ***allowed certainty and trust to be built***.

Additionally, the Tri-County FACC Watershed Overlay Subcommittee ***works collaboratively to define water management projects and programs that address common goals and objectives within the three IRWM Plans cross planning area boundaries***. Continued coordination efforts are critical to the success of the Tri-

County FACC. All Tri-County FACC planning areas are supporting this effort in part from their planning grant requests, matched with local funds and in-kind contributions. More information about the development and activities of the Tri-County FACC and its Overlay Subcommittee will be added to the IRWM Plan as part of the IRWM Plan Update Task 2 (See Section 5.2).

1.2.2 Competing Interests

Historically, the entities in the Tri-County FACC suffered prolonged disagreement and litigation on water supply issues. With the legal settlements and agreements that have been developed over the past several years, members of the Tri-County FACC cooperatively manage water allocation on many levels. Significant agreement now exists on imported water allocation within the Funding Area and cooperative efforts to expand the storage and management of these resources are underway. Additionally, the Santa Margarita River Watershed Overlay Area is beginning to benefit from a very recent settlement on the Santa Margarita River which resolves longstanding claims to water rights by the Pechanga Band of Luiseno Indians. Significant funding for projects to benefit the upper and lower river areas were recently authorized and funded in the Federal Omnibus Lands Bill signed in March 2009. ***While individual areas within the Tri-County FACC indeed have competing local interests, recent settlements and the Tri-County FACC MOU itself attest to the willingness and capacity of the region to work together when fairness and certainty are documented.***

1.3 The Santa Margarita Watershed

The Santa Margarita Watershed drains an area of approximately 750 square miles (475,000 acres) in southwestern Riverside and northern San Diego Counties in southern California. Two regions serve as the dominating features, the mountainous highlands in the upper region and the broad sea terrace in the lower region.

Unique in character, the Upper Santa Margarita Watershed is a land of opportunity containing open spaces, landscapes, and treasured biological resources.

Drainage in the basin is provided by the Santa Margarita River with flows from Temecula and Murrieta Creeks in the upper watershed. Major tributaries of Temecula Creek include Pechanga Creek and Wilson Creek via Vail Lake. Major tributaries of Murrieta Creek include Saint Gertrudis, Tucalota (via Lake Skinner), and Warm Springs Creeks. After the convergence of Temecula and Murrieta Creeks other major tributaries to the River include De Luz, Sandia, Rainbow, and Fallbrook Creeks. Major lakes in the watershed include Skinner, Vail, Diamond Valley, and O'Neil Lakes. A coastal lagoon lies at the mouth of the River on U.S. Marine Corps (USMC) Camp Pendleton.

The Upper Santa Margarita watershed is comprised of: urban and suburban areas of moderate to lower density along the I-15 corridor including the communities of Murrieta, Temecula, Murrieta Hot Springs, and Wildomar, among others; rural

residential, tribal, and agricultural areas; and forest and open space. The majority of the population and water resources infrastructure has been developed in the urban-suburban and agricultural areas.

Multiple studies have indicated that the Santa Margarita Watershed is the largest and best example of a riparian and estuarine system in southern California. The Temecula Gorge and Santa Ana Mountains just south of the confluence of the Temecula and Murrieta Creeks in the upper watershed serve as a natural barrier between the lower and upper watersheds. Almost all flows from the upper watershed pass through the Temecula Gorge. Water and land use management actions by agencies in the upper watershed affect water resources in the lower Santa Margarita Watershed. Development and channelization in the lower reach of the river is minimal while rapid development and population growth in the upper watershed is expected to continue over the 20-year IRWM Plan planning horizon (to 2030) and beyond.

1.3.1 Upper Santa Margarita Planning Area Boundary

The Santa Margarita River Watershed encompasses approximately 750 square miles in southwestern Riverside and northern San Diego counties. The majority of this planning grant application is for the Upper Santa Margarita Watershed, defined as the portion of the watershed located in Riverside County. This area of the watershed includes approximately 548 square miles and includes a vast network of ephemeral stream with two main drainage basins, Temecula and Murrieta Creeks.

While establishing the Tri-County FACC, the participating RWMGs identified one small void area between the three planning regions utilized for the Proposition 50 grant funding cycle. The Upper Santa Margarita Watershed IRWM region incorporated this small area (a portion of the upper San Mateo Canyon watershed and a portion of the Santa Ana watershed, both in Riverside County) into its regional boundary in order to ensure that all land area within the San Diego Funding Area is addressed in an IRWM planning effort. The majority of the San Mateo Canyon and the Santa Ana Watersheds contained within the Upper Santa Margarita Watershed IRWM region lie in the Cleveland National Forest, which is managed by the U.S. Forest Service. This area does not currently have developed water resources or identified water management needs; however, being largely undisturbed it maintains wildlife corridors and provides suitable habitat for the region's fauna. Additional efforts are needed in this area to better understand the needs and issues for the IRWM Plan. However the San Mateo Canyon Watershed and the portion of the Santa Ana watershed within the Upper Santa Margarita Watershed planning region will be added to the text and figures in the IRWM Plan as part of the IRWM Plan Update (Task 2 - See Section 5.2).

The Upper Santa Margarita Planning Area fully covers the Upper Santa Margarita Watershed that is entirely contained within the southwestern portion of Riverside County, Upper San Mateo watershed, and a small portion of the Santa Ana watershed as shown in Figure 1. San Diego County developed a separate IRWM Plan including only the portion of the Santa Margarita Watershed that is within San Diego County.

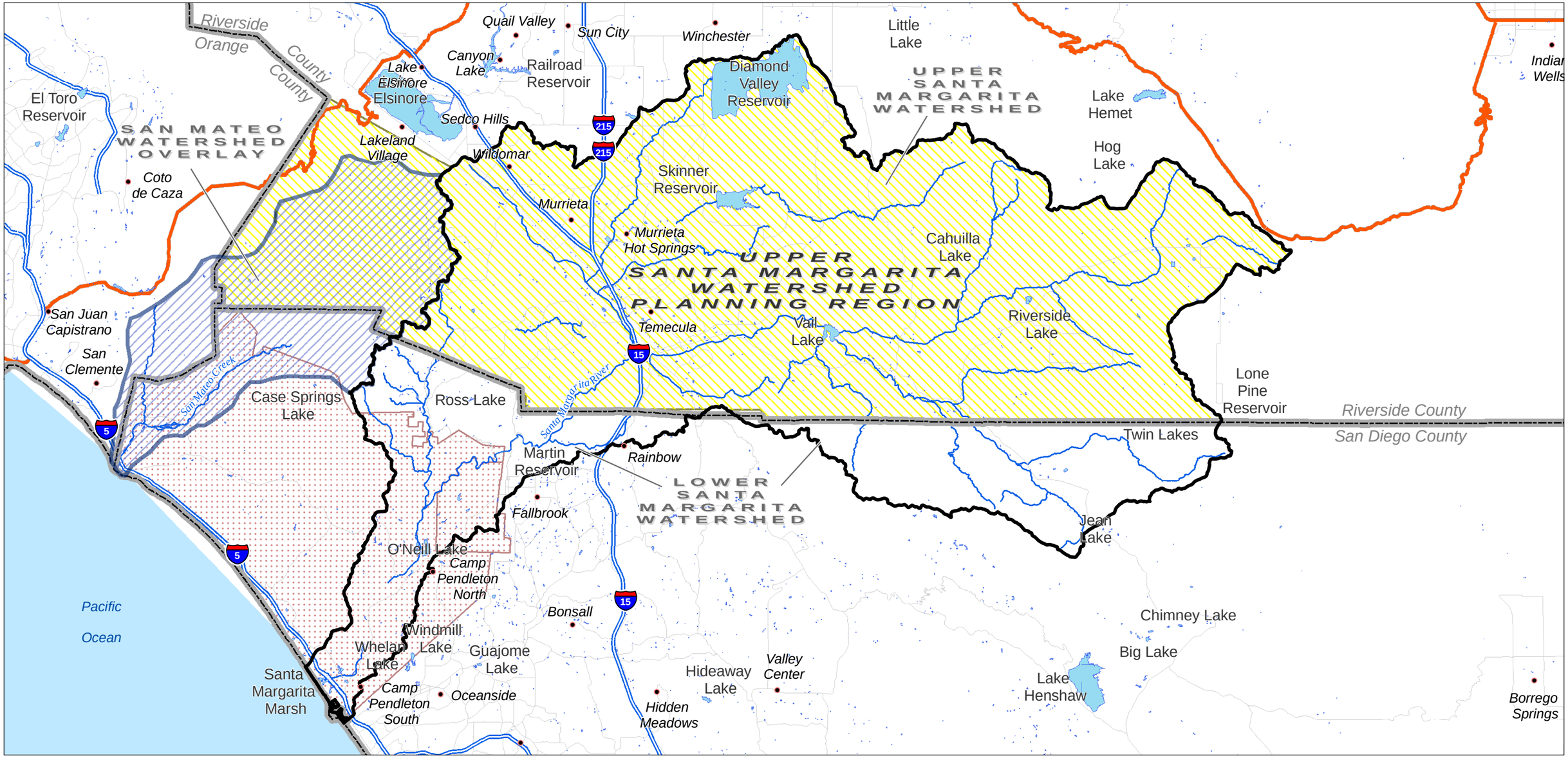
Figure 1 illustrates the boundaries of the watershed as whole and the portion that is the primary focus of the Upper Santa Margarita Watershed IRWM Plan. While the upper watershed is the focus of this effort, careful attention is paid to the priorities, plans, and projects that provide benefits to the entire watershed.

The Upper Santa Margarita Watershed IRWM Plan is a planning process for the upper watershed that examines the entire suite of water benefits including improved water supply reliability, protection and improvement of water quality, sustainability through environmental stewardship, promotion of multiple benefits, and promotion of integrated and regional planning. ***Ultimately, the IRWM Plan positions this region for integration of the entire watershed area, San Mateo overlay area, and adjoining regions – with a new foundation and opportunity for resolving long standing historical water conflicts and lawsuits.***

1.3.2 Upper Santa Margarita Planning Area Water Management

The Upper Santa Margarita Planning Area major service area and water management boundaries include the Eastern and Western Municipal Water District Service Area as well as retail service in the cities of Temecula, Murrieta, and other water providers. Additionally, Riverside County Flood Control and Water Conservation District provides flood management and water conservation management service to the area. The County of Riverside manages the Multi-species Habitat Conservation Plan, County parks and Open space and County Public Health which do not directly manage potable water but does manage considerable water related habitat or health and safety concerns. All of these are directly represented by the RWMG participants.

Significant involvement from DAC and tribal stakeholders such as the Elsinore, Murrieta, Anza Resource Conservation District, Anza Municipal Advisory Committee, Pechanga Band of Luiseno Indians, and Cahuilla Band of Indians, represented through SAC participation are integral to IRWM planning, project development/selection, and implementation.



LEGEND

- City
- Regional Highway
- State Highway
- Major Street
- San Mateo Watershed Boundary
- Upper Santa Margarita Planning Region
- Santa Margarita Watershed Boundary
- Camp Pendleton Boundary

N

0 2.5 5 10

Miles

Figure 1 Upper Santa Margarita Watershed Planning Region

September 20, 2010

CDM

Data Sources: Riverside County Flood Control & Water Conservation District, ESRI Streets & Maps, USGS National Hydrography Dataset.

PAGE LEFT INTENTIONALLY BLANK

Rancho California Water District took the lead with the County of Riverside and the Riverside County Flood Control and Water Conservation District in development of an IRWM Plan for the upper portion of the Watershed (Figure 1). The Temecula Gorge and Santa Ana Mountains just south of the confluence of the Temecula and Murrieta Creeks in the upper watershed serve as a natural barrier between the lower and upper watersheds. Murrieta Creek and its tributaries drain approximately 222 square miles in the northwest portion of the upper watershed. Temecula Creek and its tributaries drain approximately 366 square miles with the upper portion of the watershed and almost all flows from the upper watershed pass through the Temecula Gorge.

With respect to political and jurisdictional boundaries, the IRWM planning region boundary encompasses the service areas of multiple federal, state, and local agencies. Figure 2 shows the Regional Water Quality Control Board (RWQCB) boundary, which covers both the upper and lower Santa Margarita watershed. Since the IRWM planning region boundary is along the county line, Riverside County agencies naturally have jurisdiction at the county level. Thus, Riverside County Flood Control has the primary responsibility for flood control within the IRWM planning region boundary, including maintenance of dams, flood basins, levees, open channels, and major underground storm drains.

Water is provided by four water districts within the IRWM planning region boundary: Elsinore Valley Municipal Water District, Eastern Municipal Water District, Western Municipal Water District, and RCWD. Of the four water suppliers within the Santa Margarita Watershed, RCWD is the only supplier that is completely within the watershed. The other three are only partially in the watershed. Figure 3 shows the watershed boundaries and the boundaries of the four water districts. Over the course of a long history of legal action with respect to water supply in the Santa Margarita Watershed, the rights to one third of the supply of surface waters and groundwater supporting surface water has been given to RCWD, and the other two-thirds to Camp Pendleton in the lower portion of the watershed, outside of the boundaries of the IRWM region.

THIS PAGE LEFT INTENTIONALLY BLANK

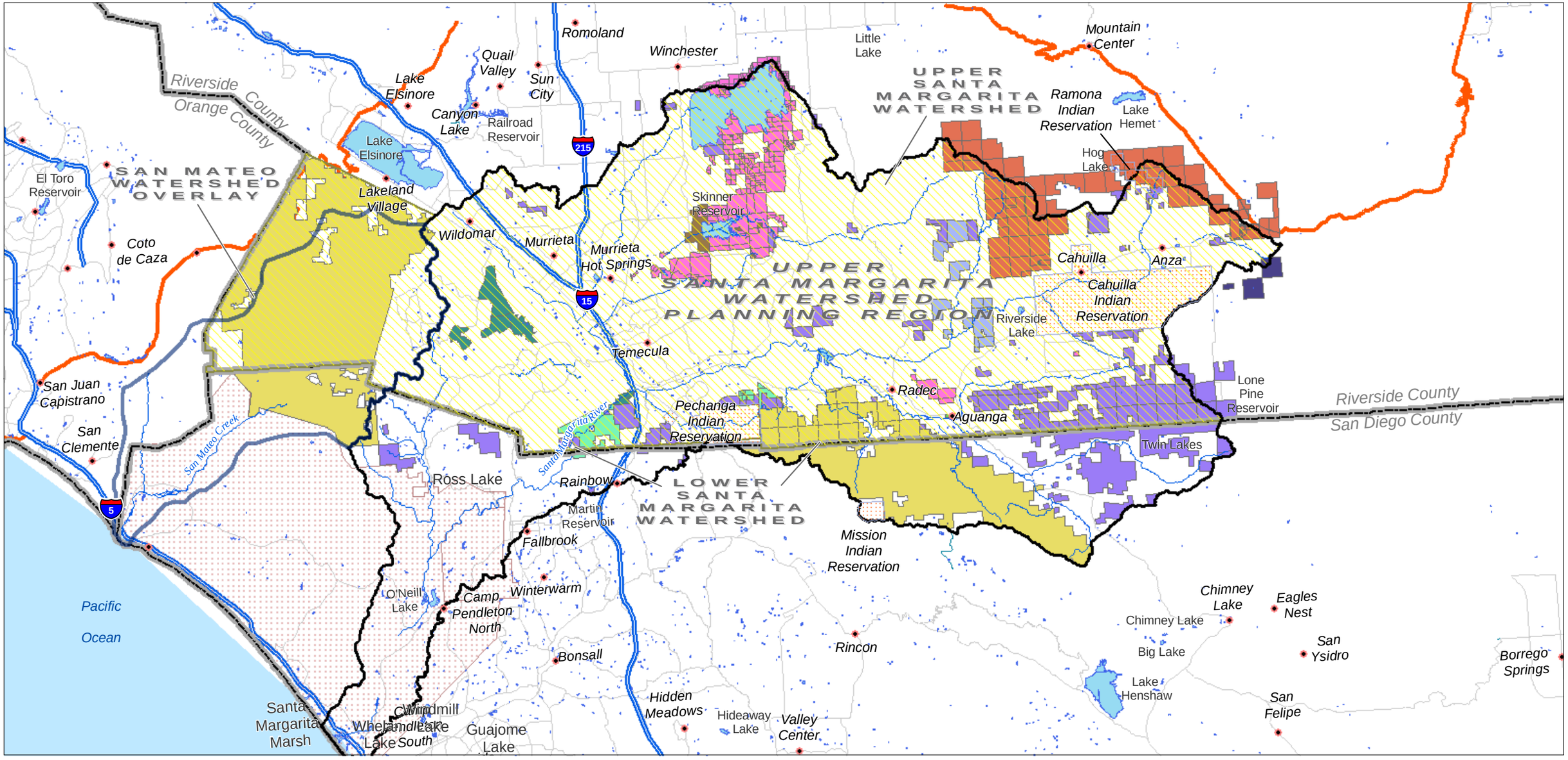


Figure 2 Land Managers and Jurisdictions in the Upper Santa Margarita Watershed Planning Region

LEGEND

- City
- Regional Highway
- State Highway
- Major Street
- Santa Margarita Watershed Boundary
- Camp Pendleton Boundary
- Upper Santa Margarita Watershed Planning Region
- San Mateo Watershed Boundary
- Riverside County Flood Control
- San Bernardino National Forest
- State Lands Commission
- County of Riverside
- Department of Fish and Game
- Department of Parks and Recreation
- Bureau of Land Management
- Cleveland National Forest
- Regional Conservation Authority
- Native American Reservation

0 2.5 5 10
Miles

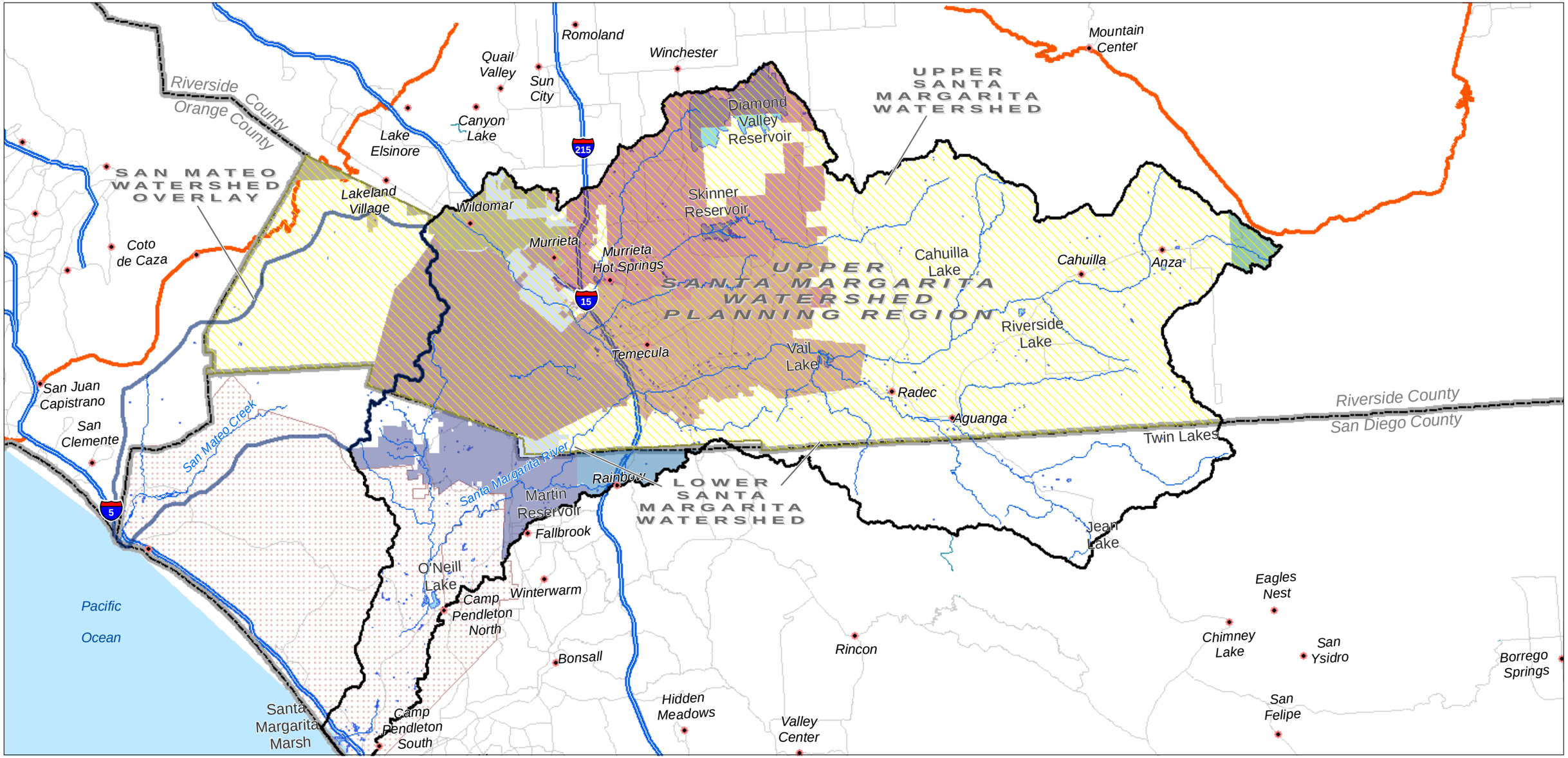
N

CDM

September 20, 2010

Data Sources: Riverside County Flood Control & Water Conservation District, ESRI Streets & Maps, USGS National Hydrography Dataset.

PAGE LEFT INTENTIONALLY BLANK



LEGEND

- City
- Regional Highway
- State Highway
- Major Street
- Santa Margarita Watershed Boundary
- Camp Pendleton Boundary
- Upper Santa Margarita Watershed Planning Region
- San Mateo Watershed Boundary
- City of Oceanside W.S.A.
- Eastern Municipal Water District
- Elsinore Valley Municipal Water District
- Elsinore Water District
- Fallbrook Public Utility District
- Murrieta County Water District
- Rainbow Municipal Water District
- Rancho California Water District
- Riverside County
- Western Municipal Water District

N

0 2.5 5 10

Miles

Figure 3 Water Districts in the Upper Santa Margarita Watershed Planning Region

CDM

September 20, 2010

Data Sources: Riverside County Flood Control & Water Conservation District, ESRI Streets & Maps, USGS National Hydrography Dataset.

PAGE LEFT INTENTIONALLY BLANK

1.3.3 Upper Santa Margarita Watershed Planning Region Water Quality, Biological Resources, Land Use, and Economic Conditions

Water quality in the upper watershed is generally good. There is continued concern associated with waterbodies located near urban and newly developing residential areas within the region as urban runoff has been identified as a potential source of pollution for several constituents and areas. There are several reaches within the region included on the Section 303 (d) listing of impaired waterbodies. Some of these waterways, including the Santa Margarita River, cross over the IRWM boundary.

Significant biological resources are described in the Western Riverside Multi-Species Habitat Conservation Plan (MSHCP) and in the 2007 Upper Santa Margarita Watershed IRWM Plan. The Upper Santa Margarita Watershed encompasses approximately the southern third of the area covered by the MSHCP. Since the IRWM boundary ends at the Riverside County line, the MSHCP provides an appropriate boundary within which the MSHCP policies for habitat conservation planning are applied.

Our region's projects promote ecosystem sustainability through preserving, enhancing, and restoring ecosystem functions in an integrated manner to address flood control and water supply reliability for the region.

Preserving biological resources is important to the RWMG, stakeholders, and SAC, as evidenced by the development of an ecosystem sub-committee and the regional objective: Restore, Enhance, and Maintain Habitats and Open Space. To assist in achieving the sub-objectives, a planning project to improve the habitat in San Mateo Canyon Watershed is included as Task 5 (Section 5.5). The purpose of this project is to develop mapping and plans that will lead to the removal of invasive flora that diminish steelhead habitat and to educate homeowners on the issues associated with stocking residential ponds with non-native fish.

In the early 1900's lands in the Upper Santa Margarita Watershed were first altered from riparian forest into agriculture. Land use pressures are now increasingly associated with suburban development around the cities of Temecula and Murrieta. The County of Riverside's land use policies and recommendations are applicable throughout the IRWM planning region boundary.

Existing land use within the watershed can be divided into three main categories, in keeping with the Western Riverside Multi-Species Habitat Conservation Plan (MSHCP): developed, agriculture, and open space. Developed land includes residential, commercial, industrial, public facilities, recreational, and rural uses. Open space includes natural land, vacant land, and water.

While the majority of land in the Upper Santa Margarita Watershed is considered developed (approximately 70 percent), many of these lands are in rural areas where residences are spread out on large estates and ranches. Urban and residential

development associated with the cities of Temecula and Murrieta and newer and smaller communities of Wildomar and Murrieta Hot Springs make up approximately 25 percent of land use in the upper watershed. Agricultural lands make up approximately 12 percent of the upper watershed, and include avocado and citrus groves and vineyards. Open space makes up the remaining 18 percent of the upper watershed, and includes approximately 70,000 acres of existing preserved lands for conservation and public use.

Current economic indicators continue to point towards ongoing future growth in Riverside County's economy. Economic indicators used to establish current economic conditions and trends include median household income related to disadvantaged communities, housing, and job growth.

While the economy has slowed growth in the near term, the watershed faces significant long term population growth and development, which will continue to place demands on the region's water resources and pose significant challenges to protecting its water supply and quality. Currently the region has faced high unemployment and home foreclosures.

There appears to be a correlation between disadvantaged communities and water resource management issues in the upper watershed. Water resource management issues encompass the entire upper watershed and are linked to the vicinity of disadvantaged communities. For example, vineyard workers have become homeowners and now occupy multi-family housing units in disadvantaged communities adjacent to vineyards where they are employed. Efforts to improve water efficiency in agricultural areas increase agriculture sustainability therefore benefiting disadvantaged communities. Vail, Skinner, and Diamond Valley Lakes provide water resources and recreational opportunities to disadvantaged communities. Two disadvantaged areas in the western portion of the upper watershed are within the vicinity of the 303(d) listed Murrieta Creek; however the majority of tracts within the vicinity are not disadvantaged.

Per the 2007 Upper Santa Margarita Watershed IRWM Plan, during the forecast period 2005 to 2030 Riverside County is expected to have an annual average employment growth rate of approximately 8 percent. Employment levels are expected to reach approximately 1,168,800 in 2030. As projected in the Riverside County Projections 2006, the five largest employment sectors in 2035, from largest to smallest, are expected to be retail, construction, health care and social services, and government. Each of these sectors is expected to employ 150,000 or more employees in 2035. Population serving jobs, jobs that are a function of population growth, are expected to maintain pace with projected population increases. Job growth in basic sectors, jobs that are a function of market economy growths, are expected to experience positive growth over the forecast period except for agriculture jobs. Leisure and hospitalities are expected to experience strong growth over the forecast period as casino businesses expand on Tribal Lands. Riverside County will continue its trend of increasingly shifting from a logistics and manufacturing based economy to

an information/professional services based economy. These statistics will be revisited as part of the IRWM Plan Update (Task 2 – Section 5.2).

1.4 The Upper Santa Margarita IRWM Plan

The purpose of the IRWM Grant Program is to provide funding for projects that protect communities from drought, protect and improve water quality, and improve local water security by reducing dependency on imported water. As mentioned throughout the 2007 IRWM Plan, the IRWM process was very quickly developed and implemented taking into consideration from the onset the guidelines for Proposition 50, Chapter 8 IRWM Grant Funding.

The RWMG members, namely, RCWD, Riverside County Flood Control and Water Conservation District, and County of Riverside approved the initial formation MOU on July 31, 2007. The RWMG participated in the entire planning process in accordance with the MOU and reviewed and agreed on the goals objectives and projects included in the IRWM Plan, which contains significant major public infrastructure and conservation projects.

The RWMG noticed and held hearings for preparation and approval of the IRWM Plan and implementation application. On July 13, 2007, a public hearing was held on the Public Review Draft for the IRWM Plan at the RCWD offices in Temecula, California. On July 31, 2007, the RWMG collectively and with the SAC, in accordance with the MOU, approved the Integrated Regional Water Management Plan for the Upper Santa Margarita Watershed and proceeded to seek funding of included projects by application for funding in IRWM programs.

Subsequent to the MOU, the RWMG entities requested that RCWD complete the Regional Acceptance Plan Application and Submittal on behalf of the Upper Santa Margarita Watershed region.

The Upper Santa Margarita Watershed IRWM Plan will be continually revisited to address new planning and implementation activities such as the Proposition 84 Guidelines, Climate Change Adaptation Guidance, California Water Plan 2009 Update resource management strategies, and other guidance critical to water management in California..

In November 2006, California voters passed Proposition 84, the Safe Drinking Water, Water Quality, and Supply, Flood Control, River and Coastal Protection Bond Act, which provides $1,000,000,000 for IRWM Planning and Implementation. Proposition 1E, the Disaster Preparedness and Flood prevention Bond Act of 2006, which provides, among other actions, $300,000,000 for storm water projects that reduce flood damage and are consistent with an IRWM plan. ***The purpose of the 2010 IRWM Plan update is to ensure that the Plan remains current in addressing the range of water resources challenges in the Upper Santa Margarita Watershed and to conform to the guidelines and objectives of Proposition 84 and Proposition 1E in order to be eligible for these funding opportunities.*** Task 2 (Section 5.2) describes the steps that the

stakeholder group, SAC, and RWMG will take to update the IRWM Plan from its current Proposition 50, Chapter 8 state to meet the standards put forth in the Proposition 84 guidelines.

On August 31, 2010 the RWMG members updated the MOU to address changes to the IRWM program expressed Proposition 84 and continue their commitment to regional integrated planning. A copy of the updated MOU can be found in Attachment 1 of this Planning Grant Application.

Section 2
The Public Process

This section addresses the following points for discussion found on page 15 of the IRWM Grant Program PSP for Planning Grants:

- *The public process used to identify stakeholders and how they were included in the planning and decision making process for the IRWM Plan*
- *The process used to identify the region's DACs and how the Applicant engaged them in the IRWM Planning process*

2.1 Public Outreach

The Upper Santa Margarita watershed includes the communities of Temecula, Murrieta, Murrieta Hot Springs, and Wildomar, among others. The remainder of the upper watershed is within unincorporated areas of Riverside County and Tribal Lands. Population estimates for 2005 by the Riverside County Center for Demographic Research indicate that approximately 244,800 residents live within the upper watershed. Population estimates and other figures cited in the IRWM Plan will be updated provided grant funding is received (Task 2 – Section 5.2).

Approximately 26 percent of the population (64,400 persons) resides in unincorporated areas while approximately 74 percent of the population (180,400 persons) resides in the Cities of Temecula and Murrieta. Disadvantaged communities are located in the vicinity of Murrieta, unincorporated Murrieta Hot Springs, and unincorporated areas of eastern Riverside County, as discussed below.

There has been a history of strong interest by a diverse group of stakeholders in the region to develop local water supply sources and improve resilience in the event of drought and emergency conditions, while addressing the need for water quality, environmental protection, and recreational and open space opportunities. ***The stakeholders who have been involved in the Planning Region's IRWM Plan implementation represent the region's diverse population and water needs. The IRWM Plan created a more collaborative environment for DAC stakeholders to directly interface with others to better shape water management decisions in this region and neighboring regions within the Tri-County FACC.***

2.1.1 Stakeholder Identification, Coordination, and Participation

The broad and diverse residents including independent ranchers, vintners, disadvantaged communities, and tribal communities are committed to agricultural sustainability, stewardship, and care for the land.

There has been a long history of stakeholder involvement in the Santa Margarita watershed in all areas: federal, state, local, tribal coordination, multi-agency water supply planning, habitat conservation planning, land use, recreation, and transportation and infrastructure planning.
During the initial IRWM Plan planning process, the RWMG identified a preliminary

list of stakeholder groups with an interest in watershed planning efforts and representing all geographical areas of the region. Next, DACs within the region were identified through evaluation of census data. Along with low income populations living in the urban centers of Murrieta and Temecula, DACs were also identified in the eastern part of the watershed, including the Anza area and portions of Tribal Lands. Organizations representing these communities and potentially interested residents were then personally contacted by a combination of phone calls, US mail, and email to participate in the IRWM Plan planning process. These organizations included, but are not limited to, the Anza Valley Municipal Advisory Council (AVMAC) and the Cities of Murrieta and Temecula. ***As a result of this coordinated outreach, many new stakeholders, including DACs and Tribes, became actively involved in the IRWM Plan formation and implementation.***

A similar process was used to contact other tribes within the Planning Area that may or may not be defined as DACs. These tribes include: the Pechanga Band of Luiseno Indians, Cahuilla Band of Indians, Ramona Band of Cahuilla Indians, Pauma and Yuima Band of Mission Indians, Santa Rosa Band of Mission Indians, Los Coyotes Band of Cahuilla and Cupeno Indians. Outreach to Tribal Communities and DACs will continue as described in Task 1 (See Section 5.1)

Throughout development of the IRWM Plan, improved relationships and close coordination have occurred with disadvantaged and tribal communities, local and regional agencies, non-profit organizations, and other stakeholders to identify beneficial projects and serve lower income areas. Coordination will continue during the IRWM Plan update and implementation phases.

Feedback from the public is a vital component to an active stakeholder process that reflects the varied interests and needs of the groups within the region. Public input on how to improve the stakeholder process is incorporated to the extent possible to enable all who are interested to participate in the IRWM process. An extra effort is made to encourage DACs and Tribes to provide input, as these groups may have specific needs in that regard. Additional meetings have been held regarding the unincorporated Anza-Aguanga area with the AVMAC and Cahuilla Band of Mission Indians to address issues specific to water rights, water infrastructure needs, groundwater studies, and IRWM Plan-related projects. Future meetings with AVMAC and Cahuilla Band of Mission Indians will continue on a quarterly basis to continue engagement and implementation of IRWM Plan updates and projects.

The IRMW Plan is a living document and must be responsive to changing conditions in the watershed. Ongoing public input is encouraged to ensure that the RWMG and other lead agencies are aware of any new issues that may arise, and have the support from the SAC and other parties to address these issues and incorporate new ideas. Information received from stakeholders, including project data, planning studies and other milestones is continually being received and incorporated into the IRWM Plan.

Stakeholder workshops, correspondence, website updates, and outreach will continue during IRWM Plan implementation, building on the mechanisms and hard work already accomplished under the leadership of the RWMG and the SAC (Task 1 – Section 5.1).

Public Workshops

Public workshops continue in this region, as needed. RSVP to public meetings are requested and received. Over 20 agencies and organizations representing a wide range of water management issues and interests in the Upper Santa Margarita Watershed area participated in the planning process for the IRWM Plan development. Public workshops were and continue to be conducted; participants educate one another on ongoing and future water management, environmental restoration and sustainability initiatives within the watershed. Workshop outcomes included development of a vision statement, planning objectives, priorities, water management strategies, planning targets, highly integrated projects, governance structure, new partnerships, increased understanding of watershed issues, local funding, approval of an addendum to the IRWM Plan establishing a revised ranked project list, improved coordination among stakeholders, regional planning and implementation, discussion of new project nomination forms, the IRWM Plan Addendum, and a review of implementation and planning grant PSPs. This collaborative process established a foundation for these groups to work together to implement the projects laid out in the IRWM Plan. . Public workshops began in 2007 when the RWMG began IRWM planning in the Upper Santa Margarita Watershed region. Table 1 provides a schedule of public workshops and the general purpose of each workshop.

Table 1
Public Workshop Schedule

Workshop Date	Workshop Purpose
May 31, 2007	Initial IRWM workshop; Provided overview of IRWM Plan development process , schedule, and governance structure; Discussed role of stakeholders; Reviewed Proposition 50 IRWM Plan guidelines; Brainstormed on vision statement and objectives for IRWM Plan.
June 14, 2007	Hearing of intent to prepare an IRWM Plan; Review of vision statement and objectives; Solicited SAC participation; Review nominated projects.
June 25, 2007	Project prioritization and integration; Development of planning targets;
July 13, 2007	Hearing of intent to adopt and IRWM Plan; Presentation of Draft IRWM Plan.
October 28, 2008	Overview of IRWM Plan process; Feedback from Proposition 50 submittal; Successes to date; Discussion of Regional Acceptance Process; Project updates.
November 17, 2009	Overview of Proposition 84 and Regional Acceptance Process approval; Review of existing IRWM Plan; Highlights of SBX7-2 water bond funding; Existing project updates; Request for contacts for additional stakeholders.
February 16, 2010	Overview of IRWM Plan Update process to date; Overview of tribes in watershed boundaries; Existing project updates; Request for new projects; DWR updates on Proposition 84.
April 28. 2010	Overview of IRWM Plan update process to date; Review of existing IRWM Plan goals and objectives; Tri-County FACC updates; Discussion of pertinent issues in watershed; Project updates discussion.

Table 1
Public Workshop Schedule

Workshop Date	Workshop Purpose
April 28, 2010 – Anza-Aguanga Area Focus Meeting	Discussion of project nomination forms received and issues for Anza/Aguanga area.
June 16, 2010	Review of draft IRWM Plan addendum to clarify project ranking process and process to add additional projects; Discussion of supplemental project nomination form , draft ranking criteria and sub-ranking criteria, Proposition 84 timeline, and IRWM Plan Update flow chart; Presentation of San Diego Regional Water Quality Control Board priorities by David Gibson, Executive Officer.
June 16, 2010 – Anza-Aguanga Area Focus Meeting	Discussion of project nomination forms received and issues for Anza/Aguanga area; Representation of Anza/Aguanga area in IRWM process.
July 14, 2010	Stakeholder Advisory Committee invitation; Overview of timeline for grant applications; Overview of project ranking process; Final review of IRWM Plan addendum and project list.
July 14, 2010 – Anza-Aguanga Area Focus Meeting	Discussion of Anza-Aguanga project nomination forms and integration opportunities; Overview of Proposition 84 and timeline.
September 8, 2010	Presentation of timelines to respond to planning and implementation grants; Stakeholder Advisory Committee responses to invitations; Projects accepted into IRWM; Ranking of Projects for 1st round of Proposition 84 funding.

Meeting notices are issued 4 weeks prior to public meetings and meeting minutes are distributed following each meeting. Agendas and workshop handout materials are provided prior to the meetings. The frequency of meetings depends upon the upcoming IRWM activities. Schedule-related information on upcoming activities is included in all correspondence and presentations to facilitate up to date information on IRWM progress.

Website

Prior to major decisions made by the RWMG, such as IRWM Plan public draft release, adoption, MOU adoption, RAP submittal, and DWR meetings, the SAC and public are notified through public notice, advertisement, email, website, e-newsletters, and by phone, or in person communication. Information on the IRWM Plan is provided on the RCWD website, which is regularly updated with new information as it becomes available. The website provides the IRWM Plan document for downloading, as well as announcements about upcoming stakeholder meetings and other activities. Workshop dates are posted on the RCWD website and also announced approximately four weeks prior to the next public meeting. Contact information and requests for input are clearly provided on the website.

Newsletter

An "E-newsletter" is used to maintain communication with the stakeholder group when public meetings are not regularly held. During these times the E-newsletter is published periodically to maintain communication with stakeholders and provide the stakeholders with updates on the IRWM Plan and IRWM process. Dates the E-newsletter was distributed to the stakeholder list is provided in Table 2. Project updates to IRWM Plan and other call for project information is solicited through the E-newsletter, in addition to solicitation at public workshops.

Table 2
E-Newsletter Publication

E-Newsletter Date	Topics Covered
September 2008	Purpose and Goals of the IRWM Plan, Feedback from DWR on the IRWM Plan, Proposition 84 Summary, Summary of Regional Acceptance Process, Ongoing Coordination with DWR, Website for Adopted IRWM Plan, How Can I get Involved as a Stakeholder?, Upcoming Workshops, Solicitation for Volunteers to attend San Diego IRWM Plan Meetings and other IRWM Plan project implementation news.
November/December 2008	Information on DWR Regional Acceptance Workshops, including funding and schedule updates; Drought Avoidance Leadership, Call for Updates to Projects, Upcoming Workshops, Project Implementation News, Website for Adopted IRWM Plan, Solicitation for Volunteers to attend San Diego IRWM Plan Meetings.

Targeted Fact Sheets

IRWM Plan fact sheets were developed for, and distributed to, the following communities: Disadvantaged Communities (DACs), Tribes, Small Water Providers and Homeowners' Associations (HOAs). These fact sheets included general information about the IRWM Plan process and Proposition 84, their purpose, and information related to why these communities should, and how they can, become involved in the IRWM Plan process.

DAC contact information came from various stakeholders, including RCWD, other DACs, and County Agencies, such as the Department of Health and Livable Communities for the County of Riverside, who had IRWM fact sheets posted in the Women, Infants, and Children program (WIC) offices and in California Children's Services offices. Invitations to participate in the process, signed by the RWMG, were sent to Tribes and DACs via US Mail. Separate DAC fact sheets were also sent, which included a definition of a DAC as defined under the California Water Code. If there was no response to these letters, phone calls were made to those contacts for which phone numbers were available. For the Tribal contacts if there was still no response, additional letters and fact sheets were sent via US Mail to each of the Tribal contacts. In addition, all DAC and Tribal contacts with email received meeting notifications, notes, and handouts regardless of their attendance or indication of interest. Also, a list of small water providers in the watershed was provided by the County of Riverside Deputy Director of Environmental Health, Water and Well Related

Programs. Attempts were made to contact each of the small water providers by phone and Small Water Provider fact sheets were sent to those who would accept them. RCWD provided contact information for HOAs within the RCWD service area. The management companies representing these HOAs were contacted and sent HOA fact sheets and invitations to stakeholder workshops to distribute to the HOAs.

2.1.2 Outreach to Disadvantaged Communities and Tribal Communities

In order to facilitate involvement by those who were not readily able to travel to the IRWM Plan meetings, the development team met with stakeholders in the Anza-Aguanga area and attended an AVMAC meeting to explain the IRWM Plan process. Additionally, three Anza-Aguanga area meetings were held after regular stakeholder meetings to facilitate project development.

If funded, projects included in the IRWM Plan will provide an economic stimulus to the regional economy by creating employment opportunities, while implementing drought avoidance strategies to sustain future growth.

The Anza-Aguanga Groundwater Study – Phase I is a project located within this disadvantaged area (see Section 5.4 for project details). Currently, the area is unable to sustain well-water draws by residential wells as a result of an ongoing 15-year drought within the region and has led to water rights lawsuits from neighboring Native American bands. The project will include the development of a water model to develop a water resource management plan for the area. This plan is proposed to be linked to land uses in the area to create a sustainable water plan for the area. ***Efforts will potentially result in the settlement of water rights lawsuits, elimination of a virtual moratorium on new construction, balance use of limited resources currently and in the future, and renew efforts to improve facilities and amenities in the area. This will lead to an improvement in the quality of life for residents and future residents and improve the economy in the area and on tribal lands.*** As the IRWM Plan moves forward, stakeholders will also continue to participate in the AVMAC ensuring that the needs of this DAC continue to be considered and met.

Based on their participation in the IRWM planning efforts, the AVMAC produced a document that describes the work needed and the rationale for the efforts. This "mother document" was a source for the proposal internally prepared by the County of Riverside for Local Groundwater Assistance grant funding as recommended by the DWR representative. This proposal was awarded funding under capacity building and will proceed when the contract is completed and funding is available. The efforts started under this effort have garnered assistance from Congresswoman Mary Bono who has committed to assist the group in their efforts to completely fund the project. These efforts are critical to gaining the support of both the local and regional entities that have begun to cooperate to manage this sub-basin's limited resources.

In addition, the IRWM Plan stakeholder process yielded partnerships between RCWD, the Anza-Aguanga area, Cahuilla Band of Indians, and Ramona Band of

Cahuilla Indians. On-going coordination between RCWD and the Pechanga Band of Luiseno Indians has resulted in a December 2008 agreement that will provide the Pechanga tribe with rights to water from the Upper Santa Margarita Watershed. In exchange, the Pechanga tribe will give a portion of their settlement contribution ($10 to $20 million) for the IRWM Plan project. The agreement is the result of long-term efforts on the part of RCWD to develop a cooperative water management procedure with the Pechanga tribe, and will avoid a costly legal battle with respect to the water claims of other tribes (DWR California Water News, 2008).

Most recently, individual phone calls were made to DAC members to engage those not already regularly attending the stakeholder workshops. Callers provided information on the IRWM process, responded to questions, extended invitations to public workshops, and solicited ideas for projects. This intensive outreach effort was successful, as demonstrated by the large attendance at public workshops and renewed interest in IRWM planning.

2.2 Stakeholder Advisory Committee

A Stakeholder Advisory Committee (SAC) was created as authorized by the MOU and the SAC Organizing Statement. Members of the committee include individuals representing public agencies and stakeholder organizations throughout the upper watershed. SAC members were selected by consensus and serve on behalf of the three MOU agencies to inform and advise the agencies on plan goals, priorities and project integration. The existence of the SAC encourages and does not inhibit other stakeholders from participating in the IRWM process and submitting goals, priorities and projects. SAC members represent nonprofit organizations as well as federal, state, and local agencies involved in watershed management within the Upper Santa Margarita Watershed Planning Area, listed in Table 3. Current efforts have resulted in the addition of nine new SAC members, while the expanded outreach and continued efforts in Task 1 (Section 5.1) will provide the ability to reach new groups and a broader stakeholder group.

Table 3
Upper Santa Margarita Planning Area IRWM Plan Stakeholder Advisory Committee

Boojum Institute[1]	Riverside County Farm Bureau[1]
Butterfield Multi-Use Trails, Inc. [1]	Riverside County Flood Control and Water Conservation District
Cahuilla Band of Indians[1]	Riverside Lands Conservancy
California Department of Fish and Game	San Diego Regional Water Quality Control Board
Citizens for Quality of Life - Murrieta[1]	San Diego State University/Santa Margarita Ecological Reserve
City of Murrieta	Southwestern Riverside County Multi-Species Reserve
City of Temecula	The Nature Conservancy
County of Riverside	Trout Unlimited
Eastern Municipal Water District	United States Army Corps of Engineers
Elsinore Murrieta Anza Resource Conservation District	United States Department of the Interior, Bureau of Reclamation

Table 3
Upper Santa Margarita Planning Area IRWM Plan Stakeholder Advisory Committee

League of Women's Voters[1]	United States Fish and Wildlife Service
Marine Corps Base Camp Pendleton[1]	United States Forest Service, Cleveland National Forest[1]
Pechanga Band of Luiseno Indians[1]	Western Municipal Water District
Rancho California Water District	

Notes:
1 - Member joined the SAC in 2010 as a result of increased stakeholder outreach efforts.

The SAC, in conjunction with stakeholders, developed specific objectives to reflect local conditions, priorities and opportunities for their own watershed; while addressing the water management strategies of the California Water Plan and Proposition 50, Chapter 8 IRWM Grant program. The planning objectives for the Upper Santa Margarita Watershed Planning Region were developed by the stakeholders through a series of workshops to guide the development of the IRWM Plan.

Through a series of facilitated stakeholder workshops with the lead agencies, SAC, and other interested stakeholders, a vision statement, planning objectives and targets, and regional priorities were developed for the IRWM Plan. Follow-up between these workshops was conducted to maximize participation, review and get critical input. Once objectives were approved, the SAC developed regional priorities to evaluate and rank the projects. Priorities were developed based upon input from SAC members, RWMG, and incorporation of adopted relevant plans.

Next projects were evaluated for ranking by the SAC. One of the challenges of the development of a regional plan is the integration of the interests of multiple service objectives that are managed by many jurisdictions into a unified plan that fairly reflects the interests and focus of all and identifies projects and programs aligned with specific strategies to meet the objectives of the regional plan.

Although the IRWM Plan was developed by a public process and approved by the SAC and RWMG in 2007, it still requires updating. The current plan has spatial gaps that arose during the RAP process when DWR and the three planning regions in the San Diego Funding Area observed a few distinct areas that were not covered by any of the three IRWM Plans (i.e. the upper portion of the San Mateo Canyon Watershed and a small portion of the Santa Ana Watershed, both of which are located in Riverside County – Refer to Section 1.31 for a discussion of these areas). Additionally, the Tri-County FACC, a committee dedicated to close coordination and communication among the three planning regions, was developed during the RAP and is charged with facilitating the Santa Margarita Watershed overlay area, which is part of the Santa Margarita Watershed and falls within San Diego County. The IRWM Plan does not yet include discussions or mapping of the gap and overlay areas. The IRWM Plan update (Task 2 – Section 5.2) is needed to make the Plan consistent with the current and DWR approved boundaries.

The expanded RAP boundary of the Upper Santa Margarita Watershed Planning Region (the upper San Mateo Canyon Watershed) and focused stakeholder outreach efforts of the past several years have brought many new stakeholders to the public workshops and the SAC. A project focusing on habitat improvements in the San Mateo Watershed is proposed as Task 5 (Section 5.5) of this Planning Grant Application. Results of Task 5 and new stakeholder feedback will be used to develop an implementation project in the area. All "overlay area" (e.g., within San Mateo and Santa Margarita Watersheds) planning and implementation will be coordinated with the Tri-County FACC to continue high level integration and management of resource management strategies, including, but not limited to, invasive species management, forest land management, water quality improvement, education and outreach, and habitat enhancement. For example, invasive removal programs in the San Juan Creek Watershed (within the South Orange County IRWM Planning region) and similar invasive removal programs led by Mission Resource Conservation District for the San Diego IRWM Planning region will be coordinated with the invasive removal program proposed by the Upper Santa Margarita Watershed Planning region.

Based on a recently adopted Regional Board statewide Recycled Water Policy and limited knowledge of the Anza-Aguanga groundwater basin, there are also gaps with regard to the technical information presented in the IRWM Plan. To fill these gaps, a Salt and Nutrient Management Plan is proposed as Task 3 (Section 5.3) and an Anza-Aguanga Groundwater Study is proposed as Task 4 (Section 5.4) of this Planning Grant Application. Both of these planning studies will help complete the IRWM Plan.

The SAC continues to be instrumental in the IRWM planning process. For example, the IRWM Plan Addendum (discussed in Section 4) was developed during recent stakeholder workshops, which occurred during 2010, and was approved by the SAC. The broader stakeholder group and SAC also need to be more accurately represented in the IRWM Plan, which will occur under Task 2 (Section 5.2). Also included under Task 2 are the actions to bring the IRWM Plan up-to-date with the Proposition 84 Grant Guidelines and state standards, which is dependent on active and ongoing stakeholder and SAC participation.

Section 3
IRWM Plan Development

This section addresses the following points for discussion found on page 15 of the IRWM Grant Program PSP for Planning Grants:

- *The process used to identify the regions' water related objectives and conflicts*
- *The process used to determine criteria for developing regional priorities*
- *The data and technical analysis collected/performed and how that data is managed*

3.1 Collaborative Water Management Portfolio

The IRWM Plan incorporates the Integrated Resources Plan (IRP) as well as other local planning efforts such as Riverside County Multi-Species Habitat Conservation Plan. The MOU provides for all water related agencies and groups to participate in the planning of water management for the region and provide direct feedback to the agencies charged with that management and the RWMG. While the previous IRP process was open to the public, ***the IRWM Plan and governance MOU provide a process and structure for enhanced public involvement and a single collaborative water management portfolio***, prioritized on the regional goals and objectives of the IRWM region as documented in the adopted IRWM Plan for the Upper Santa Margarita watershed.

Drought avoidance measures to increase reliability and reduce reliance on supplies imported from the Delta include conjunctive storage of imported water during wet years for use in dry years, groundwater recharge, improved agricultural water use efficiency, flood management, habitat improvement, and water quality protection and improvement.

A key element of the IRWM planning process is that stakeholders should develop specific objectives that reflect local conditions, priorities and opportunities for their own watershed; while addressing the water management strategies of the California Water Plan and Propositions 50/84/1E. Therefore, stakeholders and the SAC developed the following sub-objectives for the IRWM Plan in order to further describe the objective of developing a more reliable and diverse water supply portfolio:

- Continue to implement water conservation efforts to reduce water consumption for the region.
- Continue to develop cost-effective, local water supplies such as groundwater, surface water, and recycled water in order to reduce dependency on imported water.

- Manage drought response to increase water supply reliability through implementation of water districts' urban water management plans, drought management plans, and water facilities master plans.

The use of recycled water for the IRWM planning area is expected to increase by 13% percent (or by approximately 40,000 acre-feet) before 2030 reducing reliance on imported water supplies.

- Construct, operate and maintain an efficient water supply infrastructure, including water conveyance, treatment, storage and distribution.

- Consider climate change in the evaluation of future water supply options.

3.2 Regional Water Conflicts

The Stakeholder and the SAC meetings were the primary method of expanding the IRWM knowledge of conflicts in the region. Water supply conflicts have taken many forms over the years with adjudication and allocation of groundwater and surface water flows in the region. These conflicts in the past have pitted farming and urban interests in the upper watershed against the water claimed by Camp Pendleton and lower reaches of the river. Native American Tribes had adjudicated rights to water in the watershed. On the main Santa Margarita River these conflicts have been settled through agreements and adjudication and the stakeholders efforts are primarily focused on building the infrastructure to live up to their responsibilities in the agreements. The funding in the IRWM program will significantly assist with cementing these relationships.

The Santa Margarita Salt and Nutrient Management Study, endorsed by the Tri-County FACC, will inform the Basin Plan update using a proactive and coordinated approach by maximizing use of existing estuary and stream data and early testing of NNE validation and in-stream model development.

Water quality issues are not separate from water supply conflicts. The Santa Margarita River has very low water quality objectives for salt and nutrients in San Diego Regional Board's Basin Plan, which results in water imported to the region and used water cannot be discharged to the river. This increases the stress on the river and the downstream users. While this issue, in legal terms, has been settled, a through approach to water quality management for Salt and Nutrients in the groundwater basins and surface water system of the Santa Margarita watershed is needed for the IRWM plan to coherently address these needs. Through the Tri-County FACC we have developed a project to address the water quality objectives of the established for the Santa Margarita River. The Upper Santa Margarita Watershed and San Diego planning areas, respectively, are submitting individual but linked implementation grant applications for the Implementing Nutrient Management in the Santa Margarita River Watershed – Phase 1 as an inter-regional project under the Tri-County FACC.

The Implementing Nutrient Management in the Santa Margarita River Watershed – Phase 1will provide an opportunity for the National Marine Fisheries Service (NMFS)

and the California Department of Fish and Game (CDFG) to directly engage in improving water quality and ecosystem health in the watershed. The baseline habitat surveys of the Santa Margarita River will be developed in consultation with the agencies so that stream surveys, data, and monitoring are linked to habitat protocol guidelines for salmonids and other species of concern. In this way, stream and habitat survey, assessment, and monitoring will accomplish the needs of the RWQCB subject study and NMFS/DFG and other stakeholders (such as Trout Unlimited and Elsinore Valley Murrieta Anza Resource Conservation District) focused on like-minded efforts such as the Southern California Steelhead Recovery Plan. ***This integrated approach will also leverage opportunities to create more integrated watershed projects with roles for agencies, non-governmental organizations, and other interested parties.***

To address salt and nutrients in the groundwater, a Salt and Nutrient Management Plan for the groundwater basin is being submitted under this planning grant application (Task 3 – Section 5.3). This and the Implementing Nutrient Management in the Santa Margarita River Watershed – Phase 1 project are needed to supplement the IRWM Plan and to improve both water quality and supply management for the region.

With our detailed work and meetings with DAC and other communities in the IRWM planning region we have identified other secondary conflicts in the region. Issues over rural and urban lifestyles on land use and development are prevalent; also issues related to rapidly increasing water rates, and inadequate flood control are common areas of discussion. The IRWM plan in its update will need to provide additional information and understanding of the water related segments of these issues (Task 2 – Section 5.2).

3.2.1 Rancho California Water District

All aquifers managed by RCWD are located in the Santa Margarita Watershed. Oversight of all groundwater production within the Santa Margarita Watershed falls under the continuing jurisdiction of United States District Court, pursuant to the case of the United States v. Fallbrook Public Utility District, et al. (the "Fallbrook Public Utility Case"), and is administered by a court appointed watermaster (the "Santa Margarita Watermaster"). The court appointed a Steering Committee, comprised of representatives of the United States, EMWD, Fallbrook Public Utility District, MWD, the Pechanga Tribe and the District to assist the court and the Santa Margarita Watermaster. The need for the Watermaster and the Steering Committee stems from litigation begun in the early years of the twentieth century over various water rights between two cattle ranches: the Vail Ranch and the Santa Margarita Ranch. RCWD, through the Vail Lake Agreement, has assumed the rights and responsibilities of Vail Ranch, and the United States Marine Corps Base, Camp Pendleton is the successor in interest to the Santa Margarita Ranch.

In 2002, RCWD and the Camp Pendleton entered into a Cooperative Water Resources Management Agreement (CWRMA) which supplements the Fallbrook decree and has been approved by the Court in the Fallbrook Public Utility District Case. In general

terms, the CWRMA divides the natural supply of Santa Margarita River supply one-third to RCWD and two-thirds to Camp Pendleton and requires RCWD to provide make-up water if there is a shortage in Camp Pendleton's share of the river flows. As long as the parties comply with the provisions of the agreement, the long-standing water rights dispute between RCWS and Camp Pendleton over the Santa Margarita River is considered to be ended.

Settling the water rights disputes in the watershed is a result of RCWD's long-term management policies. In 1966, RCWD instituted an agency agreement program which required property owners to assign management of their water rights to RCWD in return for acquiring service from RCWD. This program has now allowed the RCWD to cover 95% of the properties within the RCWD's boundaries with a restriction on drilling wells and producing groundwater. Consequently, RCWD controls the majority of the groundwater production in the upper basin. As such, RCWD is able to manage the basin on a long-term sustained yield basis. The next step in managing the basin is to understand and develop a plan for salt and nutrients in the groundwater. Task 3 (See Section 5.3) will allow RCWD to collect the data and develop the necessary tools to create a groundwater salt and nutrient management plan.

3.2.2 Anza-Aguanga Area

Through the Upper Santa Margarita Watershed Planning region's special DAC outreach efforts, a data gap was identified for specific issues in the Anza-Aguanga communities. These areas are upstream of the Santa Margarita River and have no access to imported water. There are active adjudication/allocation efforts underway for this isolated area. Rural residential, Native American Tribes, as well as agricultural interests need adequate water supply and debate rages within the community about the adequacy of water for the region's current and future users. Both the region's planning and implementation grant applications will contain projects that will assist in developing the stakeholders' ability to manage water within the resources of the area. Funds to complete Phase 1 of the Anza-Aguanga Groundwater Study are requested under this planning grant application (Task 4 – Section 5.4).

3.3 Regional Priorities

Regional priorities, both short-term and long-term, were developed during the IRWM planning process and are identified below. These priorities were developed based on input and review by the Leadership Group and SAC as well as incorporation of relevant adopted plans to address needs for consistency amongst adopted plans and policies. These priorities, developed in 2007, have been met by the region, and continue to provide unified direction for the region as the IRWM planning process has progressed.

3.3.1 Short Term

Short term regional priorities include:

- Establish a regional structure for development and implementation of the IRWM Plan;
- Adopt the IRWM Plan by August 1, 2007;
- Identify projects that implement regional objectives;
- Maximize opportunities to partner on projects through local, state, and federal funding sources;
- Establish initial planning targets for water supply, sustainability, water quality, habitat and open space, flood plain, land use, stewardship, and water resources; and
- Determine which water management strategies can contribute to meeting the identified objectives.

3.3.2 Long Term

Long term regional priorities include:

- Monitor success in achieving regional targets for water management, and review if targets need revision or refinement;
- Maintain a regional governance structure to implement the plan and projects while continuing to develop projects that meet regional objectives; and

In addition to regional priorities, planning objectives for the Upper Santa Margarita Watershed Planning Region were developed by the stakeholders to guide the development of the IRWM Plan and evaluate projects. Objectives were identified taking into consideration the interests of the different stakeholders and resolving water issues and conflicts; as well as the vision of the California Water Plan and the IRWM Grant Program guidelines. Initial objectives were identified by stakeholders during the first stakeholder workshop, with many of the initial objectives reflecting goals identified in completed water supply plans, general plans, resource management plans, and watershed planning efforts. Initial objectives were then refined, finalized, and approved in a subsequent stakeholder workshop. The objectives will be implemented through the RWMG and SAC to garner and strengthen a single collaborative water management portfolio.

Planning Targets were developed for each regional objective by the stakeholders and the SAC to provide benchmarks for projects included in the IRWM Plan. Metrics were not established when the IRWM Plan was initially developed and adopted, which is inconsistent with the Proposition 84 guidelines. The IRWM Plan update (Task 2 – Section 5.2) will include metrics for each Planning Target, as required by the Proposition 84 guidelines. Metrics will be either qualitative or quantitative and will serve to answer the following questions:

- Is the IRWM Plan effective?
- Does the IRWM Plan need to be adjusted to achieve metrics that are not fulfilled?
- What types of projects are needed to bolster areas where Planning Targets have not been fulfilled (it may take 20 to 30 years to realize the Planning Targets)?

3.4 Data and Technical Analysis

IRWM planning is a collaborative process that has generated and will continue to generate data and information to support its implementation. This data can be a valuable resource to stakeholders, regional entities, the state, or the public. The upper watershed agencies utilize data developed through the IRWM Plan process and related planning processes (e.g., Rancho California Water District Integrated Resources Plan, Riverside County Integrated Project, Riverside County MS4 Permit, and other critical planning processes) to better manage water supply reliability, water quality monitoring, invasive species removal, fisheries, Multi-Species Habitat Conservation Plan species of concern, trails, parks, and open space, land use development, greenhouse gas emissions, water conservation savings, disadvantaged communities benefits, cost/benefit project results, priority project progress, funding updates, and plan implementation results. Data dissemination will occur through several mechanisms including stakeholder and partner agency meetings, website postings, email notices, and agency contacts available to provide data if requested. CEQA and NEPA process for implementation projects will also provide opportunities for public input, review, and data dissemination.

3.4.1 Data Collection

Existing monitoring efforts and the procedures and management of those efforts will be incorporated into the data management structure of the IRWM Plan without modifying their operation. For example, water quality monitoring data collection for the Santa Margarita Watershed will be coordinated through the Tri-County FACC so that all partnering agencies and entities will benefit from the data in planning efforts across multi-jurisdictional boundaries from surface water and groundwater management perspectives. Parameters for water quality monitoring will include, but not be limited to, coordination with Regional Water Quality Control Board, DWR, National Marine Fisheries Service (NMFS) and the Department of Fish and Game, relative to stream health indicators for listed species, such as the endangered steelhead trout (subject of the Draft NMFS Steelhead Recovery Plan). Groundwater

management data collection and monitoring for the Santa Margarita Watershed will also be coordinated from the headwaters (within Rancho California Water District) through Fallbrook Utilities District to the mouth of the watershed at Camp Pendleton. The Anza-Aguanga groundwater monitoring and data collection will also be integrated into the overall watershed effort so that a complete assessment of watershed health from a groundwater and integrated water resource management perspective is realized and incorporated into the IRWM Plan update. The different mechanisms for data management and dissemination will incorporate a link to existing efforts as appropriate to grant more effective access to data to all interested agencies and stakeholders, and to facilitate the project and plan monitoring and performance. This region will utilize an adaptive management approach to IRWM Plan implementation so that monitoring results inform future planning and implementation allowing for improvement and modification of planning targets, schedule, and project formulation.

3.4.2 Data Management

RCWD will maintain a central database to manage project data and performance. The database will also store all groundwater and surface water data reports. The database will also store raw data for groundwater levels and production, surface water and groundwater quality, ecosystem restoration, and other watershed monitoring projects. Stakeholders will be able to deposit project data and view or access data from other projects and stakeholders. RCWD will standardize the data to integrate with applicable state data programs and the California Water Plan. For example, the database will store groundwater data collected from groundwater projects and format the data to Groundwater Ambient Monitoring and Assessment (GAMA) standards. RCWD will monitor the database to verify that stakeholders are entering data appropriately and timely. RCWD will manage the transfer of data to the state, as necessary.

If this grant application is funded, RCWD will use the central database to compile periodic project performance reports. Depending on project implementation or the overall activity of the IRWM Plan, the reports will be published biannually or annually. These performance reports will be posted on the RCWD website for the public to access. The performance reports will include a description of recent activities on the IRWM Plan, project status updates, and performance statistics.

Stakeholder workshops and SAC meetings will continue to be a primary means for data dissemination. Partner agencies and organizations will provide handouts, slideshow presentations, and hold question/answer periods. The County of Riverside and RCWD websites will also be the primary data management tools. Public meeting dates, agendas, and meeting summaries will be posted on the websites. Relevant reports to the IRWM Plan projects will also be made available through the websites. Website addresses are: RCWD (www.ranchowater.com) and the County (www.countyofriverside.ca.us).

The upper watershed agencies will coordinate with the state to maximize opportunities to share data and meet statewide data needs. To the extent possible, future data collected under the IRWM Plan will be in a format compatible with statewide data programs, including Surface Water Ambient Monitoring Program (SWAMP), GAMA, and California Environmental Resources Evaluation System (CERES). Upper watershed agencies will work with the coordinating state agency to obtain the appropriate data formats for submission to these programs.

Section 4
IRWM Plan Implementation

This section addresses the following points for discussion found on page 15 of the IRWM Grant Program PSP for Planning Grants:

- *How integrated resource management strategies will be employed*
- *How the IRWM Plan will be implemented and what impacts and benefits are expected*
- *For existing IRWM Plan, describe how that plan meets the current IRWM Plan standards*

4.1 Implementing IRWM Plan Activities

Our region has made significant progress on objectives in the IRWM Plan adopted in 2007 by implementing IRWM Plan projects.

One of the challenges of the development of a regional plan is the integration of the interests of multiple service objectives that are managed by many jurisdictions into a unified plan that fairly reflects the interests and focus of all and identifies projects and programs aligned with specific water management strategies to meet the objectives of the regional plan.

Implementation is related to project prioritization. The key implementation elements for projects have been identified to serve the regional objectives. These implementation elements generally describe specific actions, projects, and studies, by which the IRWM Plan will be implemented; timelines for active or planned projects; entities responsible for project implementation and regulating implementation; economic and technical feasibility elements and projects status and timelines.

Implementing the IRWM Plan is expected to increase agricultural sustainability by converting agricultural irrigation to from drinking water quality to raw or recycled water; a an estimated cost savings of $200 per acre-foot.

The IRWM Plan was developed on a multi-jurisdictional structure, in the context of multi-agency participation that sets the basis for a governance structure. This multi-agency, multi-jurisdictional framework (Figure 4) in the governance structure will be the context of the IRWM Plan implementation. The governance structure will provide for management of project implementation, grant funding, communication among the IRWM Plan team, revisions/updates to the IRWM Plan, and general coordination among the stakeholders.

Beyond the institutional framework, the IRWM Plan and the projects that it promotes to accomplish its objectives, will be implemented in a context of the adopted and planned land use for the multiple jurisdictions in the watershed, other local and regional planning efforts, other local and regional project implementation efforts, and a regulatory framework that norms many of the steps for the implementation of specific plans and programs.

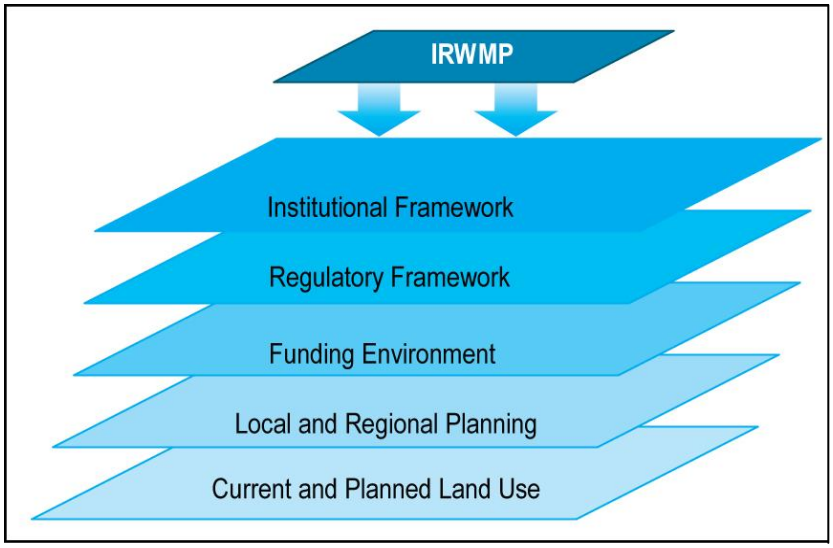


Figure 4
Implementation Framework

4.2 Employing Integrated Resource Management Strategies

In order to identify projects that implement regional objectives, outreach efforts within the planning area included a call for projects. Including projects which had been nominated and evaluated for Proposition 50 funding, more than 40 project nominations were submitted by various stakeholders within the planning region. The estimated costs for each of these projects ranged from $10,000 to over $45 million, cumulatively addressed the regional objectives and water management strategies, and benefitted a variety of locations and communities within the planning region. These projects were then vetted and discussed in stakeholder workshops. The RWMG then discussed the projects and identified projects which could be integrated in order to achieve broader goals in a collaborative, and more cost effective, way. This discussion resulted in the integration of 20 of the projects into eight "Integrated Projects". Rational for integration included:

- Integrating larger budget projects with smaller budget projects which would not have been cost-effective due project administration costs.
- Integrating projects which benefitted the same geographic locations or communities.
- Integrating projects which had programmatic scopes to be applied to the entire planning region, rather than a specific site.
- Integrating projects which duplicated efforts.
- Integrating project which had narrow focuses to provide more holistic benefit.

4.3 Impacts and Benefits of Plan Implementation

Implementation of integrated projects will lead to multiple benefits for the region, which are listed and described in Table 4.

Flood management goals are designed to encourage sustainable flood management projects, while maintaining natural hydrologic connectivity in the region's creeks and floodplains. Environmental restoration, flood control, and recreation projects connect corridors throughout the watershed, develop sustainable ecosystems, and improve downstream water quality in environmentally sensitive areas.

Table 4
Benefits of IRWM Plan Implementation

Benefit	Rational
Increased water supply reliability	■ Water conservation projects reduce demands and leave water available for dry years. ■ Groundwater and surface storage projects hold additional water during wet years for later use in dry years. ■ Recycled water projects offset potable water demands, leaving more water available for potable demands. ■ Water quality projects protect water supplies to improve the use and treatability of water supplies.
Improved water quality	■ Reduces and controls nutrient levels to improve water quality for environmental and fish and wildlife uses. ■ Helps meet TMDLs address emerging water quality issues related to urbanization, including increased total dissolved solids, metals, nutrients, bacteria, and trash. ■ Reduces agricultural runoff, increase storm water capture, decrease effluent discharges, or reduce point and non-point source pollution.
Improved environmental habitat.	■ Improving environmental habitat improves the overall health of the watershed, protects fish and wildlife, and increases the aesthetic value of the area for visitors. ■ IRWM Plan projects restore native vegetation along the Santa Margarita River, acquire land to conserve and improve natural habitats, and educate the public about the importance and preservation of native habitats
Fish and wildlife enhancement.	■ IRWM Plan projects enhance fish and wildlife by improving water quality, restoring habitat and wildlife corridors, conserving open space and removing invasive species. ■ Enhancing fish and wildlife improves the health of the watershed and the aesthetic value of the region.
Improved flood control.	■ IRWM Plan projects improve flood control through drainage plans, capital improvements projects, and river restoration efforts. Improving flood control protects the regions infrastructure and enhances public safety.
Protection of beneficial land uses	■ IRWM Plan projects protect agricultural, environmental, and open space land uses, while improving services to urban areas. ■ IRWM Plan projects protect agricultural lands by providing reliable, low-cost water to farmers. ■ IRWM Plan projects also protect and maintain environmental lands in

Table 4
Benefits of IRWM Plan Implementation

Benefit	Rational
	the region, which offer recreational opportunities and habitat to fish and wildlife. ■ IRWM Plan projects would protect remaining open spaces to maintain the historic nature of the area and rural quality of life.
Economic sustainability	■ Projects that improve water supply reliability would support urban growth in the region and avoid potential economic losses during a drought. ■ Projects maintain the agricultural economy by protecting agricultural lands, improving conservation, and providing farmers a lower cost water supply. ■ Environmental projects would increase the aesthetic value of the area and potentially attract new residents or tourists. ■ Construction of facilities would also provide temporary employment and increased spending in the region.
Public education	■ IRWM Plan projects include a public education element for water uses and conservation, habitat restoration, and pollution prevention.
Reduced regional expenditures	■ IRWM Plan projects address multiple management strategies and meet the needs of multiple stakeholders. These projects allow stakeholders to share costs rather than implementing and financing separate projects that overlap goals. ■ Cost sharing reduces the overall expenditures of the region by increasing efficiency of the regional projects, the benefits of which can be passed on to residents.
Regional collaboration	■ IRWM Plan projects promote collaboration through the planning process and implementation phases. ■ Stakeholders in the region learn to work together to develop single projects that achieve multiple benefits.
Environmental Justice for Disadvantaged Communities	■ Projects that protect agriculture, Agricultural Sustainability, and Agricultural Lands Stewardship, provide direct benefits to disadvantaged populations by maintaining job opportunities. ■ Protecting agricultural production will help keep farm workers employed and able to generate an income to support themselves and their families. ■ The Raw/Recycled Water Project and Agricultural Sustainability Projects will analyze the needs of dwelling units in agricultural areas to insure adequate potable water supplies are delivered to each parcel and will result in an inventory of actual dwelling units in the area as not all units were legally constructed. ■ Benefits to farm workers in the upper watershed also support farm labor in adjacent regions because farm workers move across regions for labor opportunities; Protecting agriculture and farm jobs in the upper watershed helps maintain the labor pool for San Diego County and Santa Ana Watershed region.

4.3.1 Benefits of Integration and Future Projects

Integration provides multiple benefits to the region that would not occur if local, independent projects were implemented. Benefits of integration include:

- Sharing knowledge, resources, facilities, and costs,
- Reducing duplicative efforts,
- Achieving broader goals,
- Improving regional collaboration, and
- Improving local understanding of water resources

Regional integration allows agencies, cities, and districts to share resources, such as labor and expenses. This can reduce overlap of efforts and allow cost sharing among involved partners. Integrating also provides the ability to address a broad range of water management goals and optimize efforts to achieve goals. Recognizing where strategies overlap or complement each other can help agencies identify a single project that addresses several water related issues or needs. Lastly, integration promotes regional cooperation and coordination within and between agencies. This collaboration increases the understanding of regional problems and develops relationships that could be used to implement future projects.

4.3.2 Impacts to Environmental and Other Resources

IRWM Plan implementation projects could result in short and/or long term impacts. Short-term impacts could occur through construction of a project and would vary depending on the scale, location, and length of construction.

Many of the projects include some degree of construction, which could affect environmental resources. Impacts during construction could include, but not limited to, clearing of vegetation, damage to special status species habitat, increased storm water runoff, air emissions, and noise levels, traffic delays, disruption or damage to public utilities, soil erosion and disruption, damage to or exposure of cultural resources, or interference with tribal assets. Construction impacts would be temporary and best management practices will be implemented during construction to reduce or avoid impacts. The CEQA and NEPA processes will develop mitigation measures to reduce or avoid potential environmental impacts.

Long term impacts could occur through operation of a project. Depending on the type of facility, operations could increase air emissions, energy use, and noise levels. Wastewater treatment facilities could increase effluent discharges. New facilities could change existing land uses. Operations and placement of facilities would be within standards set by General Plans or other planning documents.

A detailed analysis of environmental impacts will be addressed through the CEQA and/or NEPA process for each implementation project.

4.4 Meeting Current IRWM Plan Standards

Planning and Implementation projects included in the Upper Santa Margarita Watershed IRWM Plan will assist in meeting the State's 20x2020 water efficiency goal of a 20% reduction in consumption by 2020.

Although the IRWM Plan was completed in July 2007, it has always been considered a living document, subject to continual change and update. The IRWM Grant Program guidelines change in response to the specifics of each grant opportunity. In order to apply for funding through this process, the IRWM Plan must be updated and improved to conform to these changing guidelines. Currently, the IRWM Plan meets Proposition 50, Chapter 8 guidelines.

In order to bring the IRWM Plan to a minimum level eligible for Proposition 84 grant funding, the stakeholders, SAC, and RWMG developed an IRWM Plan Addendum, dated September 8, 2010. The Addendum was approved in accordance with the revised MOU by the SAC and RWMG on September 8, 2010. Specific Sub-Tasks to update the IRWM Plan to meet the California Water Plan 2009 Update, Proposition 84 guidelines, and incorporate the IRWM Plan Addendum are proposed in Section 5.2 (Task 2).

Specifically, the Addendum further describes the process for revising the project matrix and project priority list to add and/or reprioritize projects. The project matrix and project priority list will be periodically revised to reflect completion of projects, revisions to objectives associated with changes in planning documents, changes in project descriptions, and additional projects. New projects will be added through a call for projects process with notices sent to stakeholders. Objectives may simultaneously be revised subject to new priorities established in planning documents, such as the California Water Plan, Riverside County General Plan, other planning documents, and consensus stakeholder issues.

Projects will be ranked to re-determine the priority projects for the region for each grant opportunity. Project ranking will occur using a Multi-Attribute Rating Technique. This method involves: (1) defining the evaluation criteria (or objectives) for which projects will be compared against; (2) establishing performance measures that indicate when a criteria (or objective) is being achieved; and (3) determining the relative weight of importance each criteria (or objective) has in terms of influencing selection based on the requirements of the Project Solicitation Proposal issued by the Department of Water Resources. Approval of the objectives and project ranking criteria will occur within the existing governance structure through the SAC process with changes approved by the RWMG.

Additional efforts are needed to meet the Proposition 84 guidelines. These efforts are included in Task 2 (Section 5.2). These efforts are critical to bringing the IRWM Plan up to date with (1) regional priorities recently articulated during the focused

stakeholder outreach planning efforts and (2) Proposition 84 Guidelines and Statewide Standards.

Section 5
Work Plan Content

5.1 Task 1 – Ongoing Outreach and Coordination

The IRWM Plan update will support continued close coordination and plan development among the Upper Santa Margarita RWMG and neighboring RWMGs. Task 1 is the continuation of ongoing stakeholder outreach and coordination among the Upper Santa Margarita Watershed Stakeholders, RWMG, and SAC. ***The overarching goal of the ongoing outreach and coordination described in the Task 1 section and related subsections would be to highlight stakeholder needs, look for opportunities to create integrated projects, and to implement planning and projects to meet watershed needs and implementation of goals, strategies, and objectives.*** In addition, this task includes coordination on other issues within the Funding Area, such as climate change and data management.

5.1.1 Sub-Task 1A: Regional Acceptance Process

- Prepare a regional acceptance plan (RAP) document for DWR to use to evaluate and accept the Upper Santa Margarita Watershed IRWM Region. The documentation will include text, maps, figures, and tables to demonstrate that the IRWM region is the most comprehensive, contiguous area defined by common water management issues related to natural and man-made water systems.

- Attend DWR RAP interview.

- Prepare materials and responses to questions for the DWR representatives attending RAP meetings.

5.1.2 Sub-Task 1B: Previous Outreach and Coordination

- Provide extended outreach for IRWM planning process, including facilitating six (6) stakeholder workshops, outreach to tribal communities, disadvantaged communities, homeowner's associations, participation at one Anza AVMAC meeting, electrical utilities, and other federal and local agencies, two (2) e-newsletters and distribute to stakeholders and disadvantaged communities.

- Facilitate ecosystem outreach by contacting potential participants, arranging two conference calls, and follow-up activities.

- Prepare fact sheets for each targeted outreach group. Individuals within each outreach group will be contacted utilizing e-mail, US mail, and telephone calls.

- Revise the existing Memorandum of Understanding (MOU) between the Regional Water Management Group (RWMG) to reflect revisions to the boundaries of the upper watershed and to update the language for Proposition 84.

- Work with stakeholders to develop projects for the watershed area, including preparing an addendum to the Project Nomination Form to reflect Proposition 84

criteria, reviewing projects, and assisting applicants with completing the nomination forms.

- Use Criterium Decision Plus (CDP) software to rank the projects for the first round of implementation funding. This will include developing criteria and sub-criteria and weights in conjunction with the RWMG and stakeholders.

- Prepare an interim addendum to the existing IRWM Plan to address the process of adding projects to the existing IRWM Plan and ranking projects. Preparation will include a review by the RWMG and stakeholders.

5.1.3 Sub-Task 1C: Public Workshops, Website Maintenance, E-newsletters

- At a minimum, the Upper Santa Margarita Watershed Planning Region will hold quarterly public workshops for two years after the receipt of grant funds. At least eight (8) public meetings will be held.

- Each meeting will be publically noticed, advertised on the RCWD website, and an email requesting RSVP will be sent to stakeholders. Individual phone calls will be made to inactive stakeholders or recent additions to the stakeholder list (see Sub-Tasks 1C, 1D, 1E). Follow-up correspondence, including meeting minutes and action items will be sent to the stakeholder list.

- The IRWM Plan website, housed on RCWD's website, will be updated on a quarterly basis to reflect the outcomes of recent public workshops. At a minimum, meeting notes will be available for download; handouts and presentation materials may be posted to the website.

- A minimum of (4) E-newsletters will be published during the two (2) year cycle for which funds are being requested.

5.1.4 Sub-Task 1D: Meetings and Coordination with the Tri-County FACC and Tri-County FACC Overlay Subcommittee

- The Upper Santa Margarita Watershed RWMG will attend Tri-County FACC meetings to be held at a frequency of every other month for a total of twelve (12) meetings during the two (2) year grant cycle.

- The Upper Santa Margarita Watershed RWMG will attend Tri-County FACC Overlay Subcommittee meetings. At a minimum, two (2) meetings per year will be held for a total of four (4) meetings during the two (2) year grant cycle.

- Coordination with the Tri-County FACC on Funding Area (inter-regional) issues, such as climate change and data management, will occur at the Tri-County FACC meetings.

5.1.5 Sub-Task 1E: Outreach to Tribal Communities

- Individual phone calls will be made to each of the non-participating Tribal Communities prior to public workshops to extend a personal invitation to each workshop, explain the meeting purpose, answer questions, and solicit information on potential projects to include in the IRWM Plan Update. If a Tribal Community representative requests not to be called, calls will no longer be made; however, the typical stakeholder emails will still be sent.

- Up to four (4) Tribal Council meetings will be attended by representatives of the IRWM Plan leadership team. The purpose of attending these meetings is as discussed in Section 2.1.2: to facilitate involvement by those who were not readily able to travel to the IRWM Plan meetings so that tribal community needs are highlighted in the IRWM Plan and that opportunities to create integrated projects, and to implement planning and projects to meet watershed needs and implementation of goals, strategies, and objectives are accomplished.

5.1.6 Sub-Task 1F: Outreach to Disadvantaged Communities

- Individual phone calls will be made to each of the non-participating DACs prior to public workshops to extend a personal invitation to each workshop, explain the meeting purpose, answer questions, and solicit information on potential projects to include in the IRWM Plan Update. If a DAC representative requests not to be called, calls will no longer be made; however, the typical stakeholder emails will still be sent.

- Up to four (4) community or other meetings with DAC representatives will be attended by representatives of the IRWM Plan leadership team. The purpose of attending these meetings is as discussed in Section 2.1.2: to facilitate involvement by those who were not readily able to travel to the IRWM Plan meetings so that DAC community needs are highlighted in the IRWM Plan and that opportunities to create integrated projects, and to implement planning and projects to meet watershed needs and implementation of goals, strategies, and objectives are accomplished. .

5.1.7 Sub-Task 1G: Outreach to Other Stakeholders

- Individual phone calls will be made to recent additions to the stakeholder contact list and stakeholders who have not been engaged in the IRWM process prior to public workshops to extend a personal invitation to each workshop, explain the meeting purpose, answer questions, and solicit information on potential projects to include in the IRWM Plan Update. If a stakeholder requests not to be called, calls will no longer be made; however, the typical stakeholder emails will still be sent.

5.2 Task 2 - Updating the Santa Margarita Watershed IRWM Plan

An Integrated Regional Water Management (IRWM) Plan was developed in 2007 for the upper Santa Margarita Watershed in pursuit of the State of California Proposition 50 funds. This IRWM Plan is eligible for Proposition 84 funds provided that the IRWM Plan is compliant with the current Proposition 84 guidelines released by the DWR in August 2010.

Task 2 is to update the 2007 Santa Margarita Watershed IRWM Plan to achieve the following objectives:

- To reflect the planning and outreach efforts in the upper Santa Margarita Watershed undertaken since the Regional Water Management Group's adoption and DWR's approval of the 2007 Santa Margarita Watershed IRWM Plan;
- To be compliant with the standards and guidelines put forth in DWR's Proposition 84 guidelines for the Integrated Regional Water Management Grant Program and to incorporate standards released by the State of California since the adoption of the IRWM Plan, including the California Water Plan 2009 Update and the 20 x 2020 water efficiency goals;
- Expand stakeholder involvement to including additional disadvantaged communities, tribal communities and incorporate additional needs and projects to the plan; and
- To document the current coordination between the Upper Santa Margarita Watershed RWMG, the other RWMGs in the San Diego Funding Area, and the Tri-County FACC.

In order to accomplish these three objectives, at a minimum, the following sub-tasks will be completed under Task 2.

5.2.1 Sub-Task 2A: Governance and Stakeholder Involvement

The following additions, and/or modifications will be added to the IRWM Plan:

- Define the term RWMG in the beginning (i.e. Section 1) of the IRWM Plan and consistently use throughout the document.
- Update IRWM Plan with the dates and other pertinent information for Plan adoption by the SAC and RWMG. This information was prepared for the RAP.
- Incorporate discussion on subcommittees/groups within the larger stakeholder group and the manner in which they communicate with the RWMG.
- Update the Stakeholder and SAC lists.

- Add language describing adaptive management process for updating the plan in response to changing conditions and include language indicating that the IRWM Plan will be formally updated on a frequency established by the RWMG and the SAC. The minimum frequency will be no less than every 5 years, as suggested by the Proposition 84 Guidelines.

- Modify IRWM Plan text to reflect the extensive stakeholder outreach undertaken in anticipation of DWR's release of the Proposition 84 grant guidelines. Documentation will include outreach to tribal and disadvantaged communities in the planning area.

- Document the development of the Tri-County FACC and the MOU that was developed between the three RWMGs participating in the Tri-County FACC. In addition, describe the coordination issues and ongoing collaborative efforts of the Tri-County FACC and the Tri-County FACC Overlay Subcommittee.

- Add a discussion on the RAP process undertaken by the Upper Santa Margarita Watershed planning region.

- Expand on the collaborative process used to develop IRWM Plan objectives. This process was detailed in the RAP.

- Update the list of stakeholders and SAC members.

- Add sections from the RAP that discuss processes used to identify stakeholders and involve them in the decision making process. Much of this information is also found in Sections 1 through 4 of this Work Plan.

5.2.2 Sub-Task 2B: Region Description

- Modify IRWM Plan text to include the RWMG's efforts to include tribal government representation in the stakeholder group and SAC to better sustain tribal and regional water and natural resources. An example of the type of discussion that will be added is provided in Section 2 of this Work Plan.

- Expand and enhance mapping and descriptions of disadvantaged communities in the planning area and include those identified but not already included in the IRWM Plan.

- Update and expand the IRWM Plan (text and figures) to illustrate the cross boundary overlay area and project.

- Update the IRWM Plan to include the San Mateo Canyon watershed, as agreed with DWR during the RAP and the Tri-County FACC. Explain the IRWM boundary.

- Incorporate water rights, including water allocation issues for habitat/infrastructure into the IRWM Plan.

- Update the Region Description with the most recent statistics and figures available.

- Update text describing the San Diego Funding Region and the other RWMGs (planning regions) located within the funding region.

5.2.3 Sub-Task 2C: Objectives and Plan Performance/Monitoring

The following additions, and/or modifications will be added to the IRWM Plan:

- Review objectives for consistency with the Proposition 84 guidelines; Modify and/or develop new objectives accordingly. Specifically, review the IRWM Plan objectives to verify that the Basin Plan objectives, 20x2020 Water Efficiency Goals, and the California Water Code 10540 (c) are being considered. Document comparison of objectives to Proposition 84 guidelines in the IRWM Plan.

- Add a discussion stating why objectives are not prioritized.

- Develop metrics for each Planning Target to measure the effectiveness of the IRWM Plan and to determine if each objective is being met. Metrics will be qualitative or quantitative.

- Clearly define the hierarchy of objective, sub-objectives, planning targets, and metrics. Review and modify the IRWM Plan text such that the terms objectives and goals are not used interchangeably. Implementation projects will be discussed in terms of this hierarchy.

- Verify that the discussion of recommended projects includes frequency for evaluation/performance monitoring and a recommended phase during which a project-specific monitoring plan will be developed. A brief outline of each project-specific monitoring plan will be included.

5.2.4 Sub-Task 2D: Resource Management Strategies

The following additions, and/or modifications will be added to the IRWM Plan:

- Update the IRWM Plan to include the Resource Management Strategies per the California Water Plan (CWP) 2009 Update and Proposition 84 guidelines. Update the discussion of the linkages between the IRWM Plan objectives, planning targets, and RMS from the Proposition 50 Water Management Strategies to reflect the Proposition 84 and CWP 2009 Update. These linkages are used to describe the implementation and planning projects identified in the IRWM Plan.

5.2.5 Sub-Task 2E: Integration and Project Development and Review Process

The following additions, and/or modifications will be added to the IRWM Plan:

- Assist the RWMG and SAC in developing and integrating projects to present the highest value to the region.
- Describe the process used to integrate projects submitted by various stakeholders to more robust multifaceted projects.
- Update to include the IRWM Plan Addendum. The Addendum includes procedures for adding a project to the IRWM Plan, project ranking process, and ranking results.
- Update the project nomination form template and completed project nomination forms for consistency with the Proposition 84 guidelines and revised IRWM Plan. The updated project nomination form will be used for all new projects submitted for the Rounds 2 and 3 implementation phase.

5.2.6 Sub-Task 2F: Impacts and Benefits

The following additions, and/or modifications will be added to the IRWM Plan:

- The benefits of the IRWM Plan implementation are described throughout the document; however, impacts resulting from Plan implementation are not as clearly documented. Update to better describe the impacts of Plan implementation.
- Currently, Table 4-3 lists the potential environmental impacts of IRWM Plan Projects. This table will be accompanied by a similar Table describing the benefits of the IRWM Plan.
- Update the Impacts/Benefits section to include a discussion on climate change as it relates to project implementation.

5.2.7 Sub-Task 2G: Data Management

The following additions, and/or modifications will be added to the IRWM Plan:

- Update Data Management Section to include quality assurance/quality control measures that will be implemented by the RWMG for data generated and submitted to the region's central database.

5.2.8 Sub-Task 2H: Finance

The following additions, and/or modifications will be added to the IRWM Plan:

- Add a program level description of the sources of funding which will be utilized for the development and ongoing funding of the IRWM Plan. This discussion will include the certainty and longevity of known and potential funding.

- Add an explanation of the sources and certainty of operation and maintenance funding to the implementation project descriptions and include a comprehensive funding matrix for all projects to help support and ensure funding opportunities for all priority projects

5.2.9 Sub-Task 2I: Relation to Local Water and Land Use Planning

The following additions, and/or modifications will be added to the IRWM Plan:

- Review the list of local water plans, including county and cities plans to verify all relevant plans are included, and update the list if necessary. The Proposition 84/1E IRWM Guidelines provide examples of the types of plans that should be included. Recently added relevant plans will be discussed in the IRWM Plan as appropriate.

- Add a description of the dynamics and feedback between the IRWM Plan and local planning documents.

- Update the IRWM Plan with a description of how water management input is considered in land use planning and vice-versa in the Region. The intent of this section will be to integrate water management and land use planning. This discussion will describe the current relationship between land use planning, regional water issues, and water management objectives, and will include future plans to enhance these relationships.

5.2.10 Sub-Task 2J: Coordination with Tri-County Funding Area Coordinating Committee

The following additions, and/or modifications will be added to the IRWM Plan:

- The IRWM Plan update will support continued close coordination and plan development among the Upper Santa Margarita Watershed RWMG and neighboring RWMGs. Meeting frequency and coordination details are listed in Task 1, Sub-Task 1B. Funding for these activities is requested under Task 1.

- Add an enhanced and detailed discussion on state, federal, and local agencies involvement in the stakeholder process, including but not limited to: support, matching funding, and their importance to project implementation.

5.2.11 Sub-Task 2K: Climate Change

The relevant sections and sub-sections for the IRWM Plan will be written under this Sub-Task. Sections will include the update of the regional description, the greenhouse gas regional sources description and list, vulnerability assessment, project related information regarding climate change (project attributes providing benefits related to climate change, and implementation strategy considerations.

The IRWM Plan contains elements to adapt to climate change and improve water supply reliability through aggressive conservation and integration with land use strategies.

- The IRWM Plan will be updated to describe the effects of climate change on the planning area, these effects may include the amount, intensity, timing, quality and variability of runoff and recharge. To determine this, a vulnerability assessment, greenhouse gas emissions, definition of regional temperature and precipitation projections, quantification of regional impacts, characterization of regional management strategies according to climate change, and uncertainty considerations for strategy implementation will be assessed.

- Vulnerability Assessment - Define the areas and characteristics of the region that are more likely to be impacted by climate change. Develop a checklist regarding the region's characteristics, including water demands, supply sources, current conditions on demand/supply balance, future projections, and watershed characteristics (e.g. water quality, ecosystems and habitat, flooding and stormwater, hydropower, and coastal areas). Prepare a statement of vulnerability for each of the watershed characteristics, which will be used to rank the vulnerabilities, if the degree of vulnerability identified is sufficiently different. The vulnerability assessment will be included in the IRWM Plan regional description.

- Greenhouse Gas Emissions - identify the primary activities associated with water management contributing to greenhouse gas emissions in the region and complete an inventory of sources of greenhouse gas emissions, including only activities in the region associated with the management of the water resources system elements (groundwater pumping, surface water pumping, water treatment, wastewater treatment, water transmission and distribution, biosolids, etc). The sources will all be listed in the inventory and the gas that they emit (CO2, NOx, CH4) will be listed for each source.

- Definition of Regional Temperature and Precipitation Projections - define temperature and precipitation scenarios and/or ranges for these temperature and precipitation, using global climate model projections. Obtain downscale data from Global Climate Models and create an excel database of temperature and precipitation with projections to the year 2100. Using data from two emission scenarios, create tables and charts showing the ranges of potential temperature (average monthly and maximum) and precipitation (annual precipitation for a representative area of the region), for each decade, starting 2030.

- Quantification of Regional Impacts - make quantitative assessments of changes on regional variables identified in the vulnerability assessment, due to changes in precipitation and temperature. The quantification assumes that relevant impacts could include water demands, water supply, water quality, flooding and stormwater management, loss of habitat, hydropower and sea level rise. The analysis will not quantify the impacts associated with sea level rise but will describe those potential impacts and will highlight identify the impacts that could be more relevant for the region. Such impacts may include coastal erosion, higher storm-surge flooding, changes in surface water quality and groundwater characteristics, increased loss of property and coastal habitats, loss of tourism, recreation, and transportation functions, etc. The quantification of impacts will be documented in the IRWM Plan.

- Characterization of Regional Management Strategies According to Climate Change - Add objective statements of benefits related to climate change to the description of the regional management strategies (projects) included in the IRWM Plan. After the vulnerability assessment is completed, request information about project elements that could bring benefits related to climate change adaptation and mitigation in general, and specific benefits related to the areas of vulnerability identified and capture information in an excel database.

- Uncertainty Considerations for Strategy Implementation - Develop a simple guideline for implementation of regional strategies given climate change uncertainty. Develop a description of the elements of uncertainty associated with climate change predictions and analysis. Based on the elements of uncertainty, a table or diagram will be developed listing the variables that could trigger decisions about implementing specific strategies or delaying/accelerating some actions related to the regional strategy.

5.2.12 Sub-Task 2L: Incorporating Special Studies

- Incorporate the scope and schedule of the Salt and Nutrient Management Plan (Task 3 – Section 5.3) into the IRWM Plan. Add data and results of this study to the IRWM Plan once available at a schedule consistent with regular updates to the IRWM Plan.

- Incorporate the scope and schedule of the Anza Groundwater Study (Task 4 – Section 5.4) into the IRWM Plan. Add data and results of this study to the IRWM Plan once available at a schedule consistent with regular updates to the IRWM Plan.

- Incorporate the scope and schedule of the Implementing Nutrient Management in the Santa Margarita Watershed – Phase I (Task 4 – Section 5.4) into the IRWM Plan. Add data and results of this study to the IRWM Plan once available at a schedule consistent with regular updates to the IRWM Plan.

5.3 Task 3 - Salt and Nutrient Management Plan

The State Water Resources Control Board (State Board) in February 2009 adopted Resolution No. 2009-011 which establishes a statewide Recycled Water Policy (hereinafter Policy). The Policy requires the State Board and the Regional Water Quality Control Boards (Regional Boards) to exercise the authority granted to them by the Legislature to the fullest extent possible to encourage the use of recycled water, consistent with state and federal water quality laws. To achieve this goal, the Policy provides direction to California's nine Regional Boards on appropriate criteria to be used in regulating recycled water projects.

The Policy recognizes that wastewater and recycled water projects may represent only a portion of the overall salinity/nutrient loads within a watershed or groundwater basin. Section 6.a.2 of the Policy establishes that:

(2) It is the intent of this policy that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The State Board finds that… the appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual recycled water projects.

Requirements 6.b.1 (a) and (b) of the Policy state:

(a) It is the intent of this Policy for every groundwater basin/sub-basin in California to have a consistent salt/nutrient management plan. The degree of specificity within these plans and the length of these plans will be dependent on a variety of site-specific factors, including but not limited to size and complexity of a basin, source water quality, stormwater recharge, hydrogeology, and aquifer water quality. It is also the intent of the State Water Board that because stormwater is typically lower in nutrients and salts and can augment local water supplies, inclusion of a significant stormwater use and recharge component within the salt/nutrient management plans is critical to the long-term sustainable use of water in California. Inclusion of stormwater recharge is consistent with State Water Board Resolution No. 2005-06, which establishes sustainability as a core value for State Water Board programs and also assists in implementing Resolution No. 2008-30, which requires sustainable water resources management and is consistent with Objective 3.2 of the State Water Board Strategic Plan Update dated September 2, 2008.

(b) Salt and nutrient plans shall be tailored to address the water quality concerns in each basin/sub-basin and may include constituents other than salt and nutrients that impact water quality in the basin/sub-basin.. Such plans shall address and implement provisions, as appropriate, for all sources of salt and/or nutrients to groundwater basins, including recycled water irrigation projects and groundwater recharge reuse projects.

In addition to being required by the Policy, the California Department of Water Resources (CDWR) endorses the development of salinity/nutrient management plans within the *California Water Plan Update 2009.* Both the State Board and SWDR identify

all users of water as potential stakeholders in the salinity/nutrient management process.

The Policy includes provisions for the State Board to request funding from the CDWR for the development of salt and nutrient management plans, with priority funding for projects that incorporate major water recycling components. The Policy also notes that:

Statewide associations of water and wastewater agencies strongly support funding of locally driven and controlled, collaborative processes open to all stakeholders that will prepare salt and nutrient management plans for each basin/subbasin in California, including compliance with CEQA and participation by Regional Board staff.

Development of a Salt and Nutrient Management Plan is critical to water quality and supply management in the Santa Margarita Watershed and therefore the stakeholders are committed to developing a plan. This effort will improve the quality of the IRWM Plan by assisting the region's ability to meet water quality objectives and expand recycled water supplies. The Salt and Nutrient Management Plan will improve the IRWM Plan's monitoring and data management efforts in this manner as well. The scope, schedule, and results of this Management Plan will be incorporated into the IRWM Plan as described in Sub-Task 2K. This effort will also significantly improve the likelihood of full implementation of the IRWM Plan by providing the regulatory framework and alternative modeling for any future projects. This effort will fully implement Strategy 18 of the 2009 update to the State Water Plan.

The goal of all stakeholders in the Santa Margarita Watershed is to develop a comprehensive Salt and Nutrient Management Plan for the entire watershed that would identify the problems created by higher than desired concentrations of salt in the watershed, along with opportunities for addressing the problems. The project area has been divided into three portions, with lead agency responsibility for the upper watershed being RCWD, for the middle watershed being Fallbrook Public Utilities District, and for the lower watershed being the responsibility of the United States Marine Corps, Camp Pendleton. This Task is specifically for preparation of the Plan for the upper watershed.

The coverage of this Plan focuses primarily on the portion of the Upper Santa Margarita Watershed within Riverside County. It will also include the small portion of San Diego County that overlies the southeast corner of the Upper Watershed, although this area is largely undeveloped. In addition, a small, sparsely developed area along the far western edge of the RCWD district that borders on the Cleveland National Forest overlies the upper portion of the San Mateo Watershed. That watershed is an overlay area between the South Orange County IRWM Plan and the Santa Margarita Watershed IRWM Plan. Therefore to a limited extent, this plan would also consider issues relative to impacts on that watershed. There is a significantly larger portion of the upper San Mateo Watershed that also lies within Riverside County, but outside of the RCWD or any other agency boundaries. This

additional area is entirely within the Cleveland National Forest and therefore outside of the jurisdiction or control of the local agencies. Therefore, this area will not be included in the Plan.

This plan would evaluate existing beneficial uses, water quality criteria and objectives for surface and groundwater and identify the key constituents of concern. This project would also include collection and analysis of historic and current water quality data and characterize the underlying aquifers. Predictive water quality models would also be developed, which would inform the review of proposed salinity and nitrogen management approaches and priorities in the watershed and recommendations for implementation of projects in specific areas of concern.

Note that this Plan is focused on addressing salt and nutrient issues related to the use of recycled water and particularly addresses TDS and nitrogen management relative to protecting groundwater basins particularly for their use for municipal, industrial and agricultural supply. In order to develop a Salt and Nutrient Management Plan, at a minimum, the following sub-tasks will be completed under Task 3.

5.3.1 Sub-Task 3A: Conduct Initial Basin Characterization

- Identify the groundwater basins and surface water resources in the area and delineate the study area. This will include all or portions of the Murrieta, Auld, Pechanga and Deluz groundwater subbasins and the tributary streams upstream of the Temecula Gorge.

- Identify, collect, and review existing groundwater studies including region-wide studies and basin specific studies and characterizations.

- Identify stakeholders and develop outreach approach. Develop an initial list, develop and circulate outreach information and develop a preliminary outreach plan.

- Evaluate existing beneficial uses, water quality criteria and objectives for surface waters and groundwater basins for understanding constraints and opportunities for change. This would include identifying and quantifying to the extent possible existing and planned public and private groundwater wells and production and indentifying groundwater-dependent habitat.

- Characterize groundwater and surface water quality and occurrence focusing particularly on salinity and mineral constituents and nitrogen data through review of existing studies and contact with agencies or groups engaged in on-going data collection. Collect, aggregate and analyze historic and current water quality data for the beneficial uses and objectives review and the antidegradation analysis.

- Determine the salinity and nutrient constituents of concern (COC) to be addressed, focusing on parameters that may not comply with existing water

quality objectives and/or of interest to stakeholders with respect to water supply. This will include TDS and may include one or more individual ions such as Cl, SO_4, or Na if determined to be of concern; nitrate-nitrogen; and potentially iron and/or manganese. Other forms of nitrogen and phosphorus in surface waters leaving the upper basin will not be a focus of this study but would be investigated under the Nutrient Management effort mentioned in the introduction

- Coordinate with the Regional Board and develop/expand the conceptual model of the watershed.

- Prepare a Task Memorandum documenting the results of Task 3A.

5.3.2 Sub-Task 3B: Identify and Quantify Salinity/Nutrient Sources

- Identify salinity/nutrient sources to the groundwater basin for the constituents of concern identified in Task 3A. Identify land use characteristics; identify known point sources and other non-point sources and their location.

- Quantify salinity/nutrient sources in terms of volumes, concentrations and/or mass loads. Prepare a preliminary water budget and mass load estimate for the study area as well as for individual groundwater basins by updating the mass balance analysis previously prepared for the Integrated Management Plan for RCWD.

- Recommend salinity/nutrient source assessment modeling tools. Review existing models developed for the study area including the Integrated Groundwater and Streamflow Model of the Murrieta Temecula Ground Water Basin prepared for RCWD in 2004, and the WARMF model of the Santa Margarita Watershed prepared for the US Bureau of Reclamation in 2003. Review other available modeling tools that could potentially be used to assist in the source assessment and evaluation of management strategies. Based on the review, recommend an appropriate model(s) for use in the study that may include groundwater flow and transport modeling. For some subbasins, it may also be possible that spreadsheet mass balance computations may be adequate.

- Develop modeling tools based on the approach recommended above. Conduct calibration and verification to the extent possible.

- Utilize the modeling tools to assess existing conditions and rank salinity/nutrient load sources relative to their impact on groundwater quality.

- Prepare a Task Memorandum documenting the results of Task 3B.

5.3.3 Sub-Task 3C: Develop Plan for Supplemental Monitoring

- Based on the review of available data under Task 3A and the results of Tasks 3B and 3C, identify additional high priority data needs that are important to refine the basin characterization and develop a plan for collecting the required

additional data. It is assumed that there will not be extensive data gaps in the groundwater basins in the Upper Watershed and that any supplemental monitoring will be relatively short term and limited. Identify parties responsible for collecting the data.

- Based on supplemental data collected, refine or update the assessment modeling tools.
- Prepare a Task Memorandum documenting the results of Task 3C.

5.3.4 Sub-Task 3D: Assess Salinity/Nutrient Management Strategies

- Identify the preferred goals of the key agencies that will implement the plan and other stakeholders including processes for obtaining stakeholder input and resolving potential conflicts.
- Indentify available salinity and nutrient management strategies that may include any of the following:
  - wastewater salinity/nutrient source control
  - public education
  - source load reduction
  - source water salinity control
  - salt export
  - groundwater recharge
  - groundwater management
  - institutional arrangements
  - land use regulation
  - landscape conservation; and
  - stormwater/runoff management.
- Screen the options and assess the load reduction/water quality improvement potential for the more viable options using the assessment modeling tools developed under Task 3B. Rank the strategies with respect to salt and nitrogen load reduction and groundwater quality improvement.
- Evaluate and compare the feasible strategy options on the basis of factors such as:
  - anticipated water quality improvements,

  - local water supply development potential, including increasing the use of recycled waters or enhanced development of groundwater supplies,
  - regulatory compliance,
  - sustainability,
  - costs,
  - funding considerations,
  - ability to implement, and
  - environmental impacts.
- Develop implementation plan to meet objectives and protect beneficial uses while allowing more use of recycled water and water conservation practices.
- Document the efforts and identify needs for inclusion in a basin plan amendment to support the recommended plan which may include:
  - designated beneficial uses,
  - numerical groundwater concentration objectives, and/or
  - implementation policies.

  Perform environmental analysis and peer review in coordination with the Regional Board.
- Prepare a Task Memorandum documenting the results of Task 3D.

5.3.5 Sub-Task 3E: Assess Plan Effectiveness

- Identify metrics (measureable parameters) that can be used to evaluate the effectiveness of selected salinity/nutrient management strategies, and develop and a monitoring program to measure the effectiveness of the implemented groundwater management strategies.
- Establish the framework and schedule for auditing and periodically updating the salinity/nutrient management plan and identify the responsible agency or agencies for implementing the effectiveness assessment.
- Prepare a Task Memorandum documenting the results of Task 3E.

5.4 Task 4 - Anza-Aguanga Groundwater Study Planning - Phase I

The Upper Santa Margarita Watershed is located within the southwestern portion of Riverside County. The Rancho California Water District, the Riverside County Flood Control and Water Conservation District, and the County of Riverside are the three member agencies of the Upper Santa Margarita Watershed RWMG, responsible for leading IRWM planning in the watershed. The Anza-Terwilliger study area is located in the northeastern corner of the Upper Santa Margarita Watershed, and extends roughly six miles past the eastern edge of the boundary of the Watershed in the vicinity of Terwilliger. The study area includes the Anza and Terwilliger Valleys and is drained by the Elder, Cahuilla, and Hamilton Creeks. It is bounded by mountainous highlands on the north and east sides, and the San Jacinto Fault Zone traverses the northeast boundary. Currently, the annual median household income for the community of Anza and adjacent Cahuilla and Ramona Indian Reservations place them in disadvantaged community status.

Groundwater is presently the sole source of agricultural and domestic water supply in the Anza-Terwilliger area, and it has been over 20 years since the last comprehensive study of groundwater conditions took place. The Anza-Terwilliger groundwater area is a small, geologically complex, basin that serves as the sole water supply source for local economically disadvantaged communities. The basin experiences relatively heavy groundwater use and is believed to be impacted from agricultural chemicals and septage. Contemporary groundwater monitoring data is lacking, depth dependent data is missing (in particular as it applies to the deeper portions of the older alluvium), and a groundwater-surface water management tool, such as a numerical model based on reliable data, does not exist.

The Anza-Aguanga Groundwater Study is a multi-phased program to evaluate the groundwater basin within the Anza and Aguanga Area. A cooperative effort between the Anza-Aguanga IRWM Plan Community Group, Anza Grant Writing Committee, USGS and County of Riverside, this study aims to conduct the data gathering and analyses necessary to significantly improve our understanding of the hydrology and groundwater quality in order to allow the construction of a predictive groundwater model, for ultimate use by basin managers in the development of water management plans. Phase I of this project will provide the first step in a program that will provide reliable, current, information which will be used in water management plans designed to protect the community from drought.

At a minimum, the basin requires the resumption of a program of groundwater level and quality monitoring in key wells. According to USGS, Riverside County is being petitioned to allow for further housing development in the area and the impact of potential development on water resources cannot yet be quantified. The lack of adequate resource planning tools is having a chilling effect on the area's development. After completion of Phase II (funding request forthcoming), this Study will result in geohydrologic characterization of the local groundwater basins. In doing so, the

region will begin to understand its water issues; begin to determine measures that need to be taken to improve groundwater conditions, such as implementation of conservation efforts to increase groundwater levels; and determine how to efficiently manage the existing groundwater by possibly limiting development or requiring new developments to implement recharge projects to offset their demand on a limited supply.

USGS California Water Science Center developed a proposal for this Study as a part of a larger proposal in 2007. As stated in the proposal, dated February 9, 2007, the overall objectives of the study are to (1) define the geohydrologic framework of the Anza Terwilliger Area, (2) quantify the hydrologic budget, (3) determine the character, source(s), and the age(s) of groundwater in the area, and (4) develop tools to help evaluate and manage the water resources of the area. Although, the proposal was not funded, it was endorsed by the Cahuilla Band of Indians and Ramona Bands of Cahuilla Indians. Riverside County Transportation and Land Management Agency (TMLA)/Planning Department was a cooperating agency on the USGS proposal.

Based on the USGS work plan the following Sub-Tasks comprise Phase I of the Anza-Aguanga Groundwater Study and will be completed under Task 4.

5.4.1 Sub-Task 4A: Gather and Evaluate Available Data

- Consult with USGS and the County of Riverside to identify and gather available sources of data for this subject aquifer. Sources of data may include, but are not limited to, previous groundwater studies, well logs, groundwater well sample analytical results, groundwater well extraction rates and water levels.

- Summarize previously published geologic maps, correlate geological and geophysical logs from existing wells, and analyze other available data.

5.4.2 Sub-Task 4B: Collect Drill Cuttings and Geophysical Logs

- Collect and analyze cuttings drill cuttings from borings previously advanced for private wells. These physical samples will then be compared to descriptions in drillers' logs in order to ground truth the logs, identify geologic units, and help refine the geohydrologic framework.

- Collect and analyze geophysical logs of select wells in the study area, in particular, those from deep private wells, in order to correlate and confirm geologic units in the subsurface.

5.4.3 Sub-Task 4C: Compile Geochemical Data

- Compile and analyze existing available water chemistry from domestic, municipal, and agricultural supply wells.

- Determine and map the areal variation of water quality impacts including natural and man-made potential pollutants.

5.4.4 Sub-Task 4D: Report Preparation

- Prepare a Phase I Report summarizing the available groundwater data in the area, presenting the geophysical logs, summarizing geochemical data, as well as presenting data gaps which will inform the development and execution of subsequent phases of the program.

5.5 Task 5 – San Mateo Habitat Improvements

The San Mateo Creek watershed, an "overlay area" as designated by DWR and the Tri-County FACC, is located in northern San Diego County, southern Orange County, and western Riverside County and encompasses part of the Cleveland National Forest (CNF), the north end of Camp Pendleton Marine Corps Base, and surrounding private lands. San Mateo Creek rises in the CNF and flows in a southwesterly direction to the Pacific Ocean just south of San Clemente. The creek was at one time an important steelhead-producing stream in San Diego County, supporting significant local sport fisheries of both juveniles and adults. Newspaper articles from 1916, for example, report a large steelhead/rainbow trout population and high fishing success in the creek. Local residents and Department of Fish and Game (DFG) personnel have reported seeing adult steelhead ranging up to 4 feet and weighing up to 15 pounds between 1900 and 1950. After 1950 surveys began to reflect a decline of juvenile steelhead/rainbow trout in San Mateo Creek.

By 1991, one researcher classified the San Mateo Creek steelhead population as extinct. But in 1999, a fisherman reported catching and releasing a steelhead/rainbow trout from San Mateo Creek. Numerous sightings of a small population of these fish have been made since. Studies of individual fish by the DFG and the National Marine Fisheries Service (NMFS) have confirmed that they were anadromous steelhead. Wildlife biologists have become increasingly aware that the production capability of small coastal streams, such as San Mateo Creek, may be relatively small compared to large, perennial river systems, but collectively they provide a means to ensure a greater diversity of subpopulations, and are critical to range expansion and recovery after drought or other perturbations.

The purpose of this Task is to develop the tools and plans necessary to remove some of the impediments to steelhead survival and recovery such as small ponds that are home to non-native fish species and invasive flora.

5.5.1 Subtask 5A: Education of Homeowners Associations (HOA) and Home Owners on Ponds

- Educate HOA boards and homeowners on the impacts of non-native fish from ponds on San Mateo Creek. During storm events, ponds may overflow and release non-native fish. The project would include Powerpoint presentations, brochures, and site visits. Additional education would include educating Riverside County Planning staff on the impacts of ponds and non-native fish released during storm events.

5.5.2 Subtask 5B: San Mateo Invasive Species Removal

- With cooperation from the United States Forest Service (USFS), Elsinore Murrieta Anza Resource Conservation District (EMARCD), and Trout Unlimited the proposed project would survey non-native Arundo and Alyssum plant species, in and around San Mateo Creek. This project will also compare population numbers of exotic species with past survey findings.

Our region's planning and implementation projects promote ecosystem sustainability through preserving, enhancing, and restoring ecosystem functions in an integrated manner to address flood control and water supply reliability for the region.

- The proposed action will use survey information to continue the development of a long-term strategy for reducing aquatic and terrestrial animal and plant populations that limit the potential for restoring steelhead trout and other native fish populations in the San Mateo Creek watershed. Specific target sites (e.g., ponds) containing invasive fish and animals will be mapped so that resource agencies, in partnership with environmental stewards such as EMARCD and Trout Unlimited can help educate homeowners and landowners about the need for invasive species management on a watershed scale.

- The grant would also include the preparation of environmental documentation needed to implement the strategy.

5.6 Task 6 – Task Administration and Reporting to DWR

5.6.1 Sub-Task 6A: Task Administration

This task is to execute the contract with DWR, focused outreach (Task 1), and planning projects (Tasks 2 through 5). In addition to the interaction currently underway, the following are anticipated to be submitted to DWR at the indicated frequency, unless otherwise required by the grant agreement with DWR.

- Prepare invoicing and subcontract administration.

- Conduct contract administration tasks with DWR.

- Quarterly reports detailing the work completed during the previous quarter and summarizing the percent complete.

- A Final Report summarizing the financial details and the work items funded under the grant agreement.

- Individual project reports and the IRWM Plan Update are specified in Tasks 2 through 5.