

Santa Cruz IRWM Region Prop 84 IRWM Planning Grant Application

September 28, 2010



Work Plan

Submitting Organization:
Regional Water Management Foundation
2425 Porter Street, Soquel CA 95060

Coordinate with:
Tim Carson, Program Manager
831-477-0800, tim@cfsc.org

Table of Contents

1.0	Introduction – Work Plan Content	1
2.0	Update Governance Section	1
Task 2.1	Notice development and adoption of the IRWM.....	1
Task 2.2	Revise and execute new Memorandum of Agreement.....	2
Task 2.3	Clarify RWMG organization structure.....	2
3.0	Update Region Description	2
Task 3.1	Revise RAP response	3
Task 3.2	Conduct water resources availability study	3
4.0	Revise Plan Objectives	4
Task 4.1	Revise the Plan Objectives	4
Task 4.2	Identify measurable attributes and sources of impairment for each objective	5
Task 4.3	Document process.....	5
5.0	Evaluate Water Plan Management Strategies	5
Task 5.1	Document process used to evaluate water resources strategies.....	5
Task 5.2	Develop Flood Management Strategy	6
6.0	Ensure Plan Integration	6
7.0	Revise Project Review Process	6
Task 7.1	Develop a work group.....	7
Task 7.2	Identify priority projects	7
Task 7.3	Document project review process.....	8
8.0	Update Impacts and Benefits Section	8
Task 8.1	Update specific project-related impacts and benefits.....	8
Task 8.2	Identify and evaluate impacts and benefits to specific groups.....	8
9.0	Further Develop Plan Performance and Monitoring Methods	8
Task 9.1	Identify Key Monitoring Elements	9
Task 9.2	Develop simple assessment tools.....	9
10.0	Enhance Data Management	9
Task 10.1	Develop data management system.....	10
11.0	Document Plan Financing	10
Task 11.1	Identify alternative funding scenarios	11

Santa Cruz IRWM Prop 84 Planning Grant Application

Task 11.2 Document funding scenarios in tabular format 11

12.0 Document Technical Analysis 11

13.0 Evaluate Relation to Local Water Planning 11

Task 13.1 Assess dynamics between the Plan and local water planning documents 12

14.0 Evaluate Relation to Local Land Use Planning 12

Task 14.1 Conduct local land use policy assessment..... 12

15.0 Continue Stakeholder Involvement..... 12

Task 15.1 Continue outreach through workshops, meetings, website and listserv 13

Task 15.2 Document stakeholder outreach and results..... 13

16.0 Update Plan Coordination Section..... 13

Task 16.1 Document coordination activities 14

17.0 Develop Climate Change Strategy 14

Task 17.1 Assess Impacts on recharge and streamflow 14

Task 17.2 Assess potential impacts from sea level rise..... 14

Task 17.3 Review California Climate Adaptation Strategy Document 14

Task 17.4 Strategy development..... 15

18.0 Conduct Technical Study – Aromas and Purisima Basin Management..... 15

Task 18.1 Evaluate the sustainable yield of the local Purisima Formation..... 16

Task 18.2 Evaluate the condition and capacity of the Cox Road wells 16

Task 18.3 Prepare well rehabilitation / re-drill cost estimate..... 16

Task 18.4 Evaluate type and siting of a water treatment plant 16

Task 18.5 Groundwater management analysis..... 17

Task 18.6 Final report..... 17

19.0 Conduct Technical Study – Santa Margarita Groundwater Modeling..... 17

Task 19.1 Basinwide data compilation 18

Task 19.2 Hydrogeologic conceptual model update..... 18

Task 19.3 Model setup and calibration 19

Task 19.4 Model scenarios 19

Task 19.5 Technical report..... 20

Task 19.6 Technical advisory committee..... 20

20.0 Conduct Technical Study – Conjunctive Use and Water Transfers – Phase II 20

Task 20.1 Review phase I project work and recommendations 21

Santa Cruz IRWM Prop 84 Planning Grant Application

Task 20.2	Develop preliminary project engineering designs.....	22
Task 20.3	Address legal and regulatory issues.....	22
Task 20.4	Develop engineering-level cost estimates.....	22
Task 20.5	Prepare a cost-benefit analysis of each projects	22
21.0	Conduct Technical Study – Watsonville Sloughs Hydrology.....	23
Task 21.1	Data collection and project organization	24
Task 21.2	Hydrologic and hydraulic modeling	24
Task 21.3	Analysis and reporting.....	25
22.0	Compile Updated Plan	26
Task 22.1	Adopt Updated Plan.....	26
23.0	Project Management	26
Task 23.1	Ongoing Management.....	26
23.1.1	Reporting.....	27
24.0	Statewide Program Preferences	27

List of Tables

Table 1 - SCIRWMP and Statewide Priorities 27

List of Figures

Figure 1: Proposition 84 Technical Study Project Locations.....33
Figure 2: Aromas and Purisima Basin Management Project.....34
Figure 3: Santa Margarita Groundwater Model Update Project.....35
Figure 4: Conjunctive Use and Water Transfers – Phase II.....36
Figure 5: Watsonville Sloughs Hydrology Study37
Figure 6: Conceptual diagram surface water – ground water monitoring.....38

Appendices

Letters of Support

1.0 INTRODUCTION – WORK PLAN CONTENT

This document describes how the Regional Water Management Group (RWMG) will update and expand the Santa Cruz Integrated Regional Water Management Plan (Plan). The purpose of the update is to ensure that the Plan is consistent with all of the state’s IRWM Plan Standards (Standards) and provides the technical content necessary to address the range of water resource challenges in the Santa Cruz region.

This grant request is complemented by additional sources of funding, including Proposition 50 grant funds, cash match and in-kind services from the RWMG. A detailed budget is attached to the Work Plan that lists each task, the non-state share, the Proposition 84 grant request, and the total task cost. The accompanying schedule will give the reviewers an understanding of when each task will occur, how the task timelines relate to one another, and the overall time to completion of the updated Plan. **Figure 1** displays the locations of several proposed technical studies (Task 18, 19, 20, and 21).

It is important to note that the Santa Cruz RWMG has been working on elements of the Plan update for over a year and has addressed several deficiencies. We describe those efforts in this Work Plan so that the reviewers have a complete understanding of the overall effort to date, the current status of the Plan, and what is expected to occur in the future should we be successful with this grant application.

2.0 UPDATE GOVERNANCE SECTION

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$0

Local Match: \$17,817

Schedule: 10/2010 – 8/2011

This task will update the governance section for the updated Plan. This will build on the approaches described in the existing Plan, the Memorandum of Agreement (MOA), and the Region Acceptance Process (RAP) response. It is the intent of the RWMG to ensure that the governance structure goes beyond the minimum IRWM Plan standards to engage all stakeholders in implementing sustainable solutions to the region’s challenges. The RWMG will allocate staff and consultants in the development of this section. Additional detail is provided in the attached budget.

Task 2.1 Notice development and adoption of the IRWM

The RWMG will notice the development of the IRWMP as per §6066 of the Government Code. Each governing board will publicly notice intent to adopt the Plan during a public meeting. Each entity signatory to the Memorandum of Agreement (MOA) and each entity receiving grant funding will adopt the Plan.

Task 2.2 Revise and execute new Memorandum of Agreement

The existing Partner Agency MOA signed in June 2006 expires on December 31, 2010. The MOA addresses the Plan implementation and establishes the roles and procedures for implementing the Plan, with particular emphasis on the implementation of the high priority projects receiving funding support Proposition 50. Prior to its expiration, the Steering Committee will work with the signatories to update the MOA to reflect the expected scope of the updated plan, as well as ongoing planning and implementation efforts.

The MOA will subsequently undergo a more complete revision in early 2012 towards the completion of the Plan update to ensure the MOA reflects the full scope of the updated Plan. This MOA will address: roles regarding long-term Plan implementation; establish a process for future updates to the Plan and the MOA; and, procedures for engaging new Partner Agencies.

This MOA will include the following topics at a minimum:

- Description of governance structure
- Public involvement process
- Decision making
- Ensuring plan participation
- Communication
- Coordination with neighboring regions
- How objectives will be established and renewed
- How interim and formal changes will be handled
- Process for amending or updating the plan
- Process for adding or deleting priority projects

Task 2.3 Clarify RWMG organization structure

The Steering Committee developed a Stakeholder Outreach Plan that identified three different categories of participants, they are: Partner Agencies, Implementation Affiliates, and Interested Stakeholders. These designations reflect the level of involvement in the Plan's development and implementation. Each entity was contacted regarding their designation, and all agreed with how their designation. The Plan Update will be an opportunity to incorporate these designations formally. and Depending on the level of involvement, an organization's designation may change over time, for example eligible affiliates may become a Partner Agency with a higher level of involvement.,. Additionally, the Plan update process is anticipated to engage new Partners, Affiliates, and Stakeholder not previously active in IRWM process.

3.0 UPDATE REGION DESCRIPTION

Lead Agency: Santa Cruz County, Environmental Health Services
Grant Request: \$0

Local Match: \$1,149

Schedule: 11/2010 – 6/2011

The existing Plan and the RAP response contain a Region description supporting documentation, such as maps and other materials. The RWMG will allocate staff and consultants to review and update the Region description with additional information to ensure that the description meets the Standard. The RWMG will complete a water resources availability study for the region, which will support other sections of the plan, notably the Resources Management Strategy section.

Task 3.1 Revise RAP response

The RWMG will update the RAP response describing the Region’s infrastructure, natural resources, and the challenges and opportunities facing the region. The description will include information on hydrology, groundwater, vegetation, fisheries, and species and habitat of special concern. All administrative boundaries, including service areas for water and wastewater, desalination, County boundaries, and other political boundaries will be sufficiently described. Key water resources management issues will be addressed. This work will be based in part on the Standards, but expanded to encompass a thorough water resources availability analysis for the region (Task 3.2). The Region description will include information from the Climate Change standard (Task 17), particularly as it relates to modeled impacts on the Region’s rainfall, runoff and recharge.

Task 3.2 Conduct water resources availability study

The Region description will be supported by a comprehensive water resources availability analysis, which County staff are currently conducting. The analysis will describe water balances by basin and season, management constraints and opportunities, and environmental considerations. This study will generate technical information to support the development of operational efficiency and transfers, and other water supply strategies described below. Staff will analyze the San Lorenzo River streamflow to determine if excess flows would be available for recharge (either direct, or in-lieu) for adjoining water districts. Staff will conduct a gross hydrologic assessment of the County’s four large water agencies: San Lorenzo Valley Water District, Scotts Valley Water District, City of Santa Cruz, and Soquel Creek Water District. Staff will evaluate hydrologic conditions in average, wet and dry years, by season. Staff will then determine each water district’s demand, the availability of water, and calculate surpluses or shortages. The study will investigate potential water sharing scenarios, and identifying the roadblocks to each (e.g., infrastructure, permitting, cost). Specific topics that will be covered in the study will include:

- Water supplies and demands for a minimum 20-year planning horizon;
- Water resources availability will be analyzed, including:
 - water budget and availability by basin
 - Environmental needs

- Current deficiencies (and surpluses) by basin, jurisdiction, and season
- Seasonal demand
- Seasonal production capacity
- Planned or potential supplemental supplies
- Annual and seasonal sustainable yield and deficiencies
- Stream base flow, critical needs
- Groundwater storage
- Incorporation of climate change modeling results to all of the above
- Analysis of existing water quality conditions, and potential trends, including potential climate change impact

4.0 REVISE PLAN OBJECTIVES

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$30,000

Local Match: \$9,312

Schedule: 3/2011 – 6/2011

The Steering Committee revised the existing Plan objectives as part of the Proposition 84 Planning Grant Project Solicitation Process. Sixteen objectives were identified with, four for each of the four functional areas (water supply, water quality, watershed management and flood management). While the RWMG concurs with these objectives, the objectives may need to be refined to ensure that they are measurable and adhere to the requirements in the California Water Code (§10541.(e).(2), §10608 and §10540(c). Objectives may also need to be modified to support the strategy prioritization process (Task 7).

Task 4.1 Revise the Plan Objectives

The Steering Committee and staff, with assistance from consultants, will review the objectives to ensure that they are clear and measurable, adhere to the Standards and support the Plan's goals. The objectives will be updated for consistency with the updated Central Coast Region Water Quality Control Plan (Basin Plan), and the Basin Plan's 20% by 2020 reduction goal. Other considerations, such as agricultural and water use efficiency as defined by the 2009 legislation, will be evaluated and incorporated, where applicable.

The RWMG identified overarching goals that address each of the four functional areas. Objectives are organized under each goal to provide a measurable metric by which the RWMG can evaluate progress towards achieving the goal. The work group will simplify objectives as much as possible without losing the focus of the goal. The work group will then re-state current conditions and key impairments of systems, derived from the revised Region description and water resources availability study. For example, if the goal is to balance use with sustainable supply, an objective could be to increase summer baseflow, as an indicator of balanced use. The key impairments addressed would be the water diversions and groundwater pumping that result in diminishing streamflow and groundwater contribution.

Task 4.2 Identify measurable attributes and sources of impairment for each objective

This task will identify the key attributes controlling each Plan objective as well as the factors or sources that contribute to impairment. Much of this information is available, but is currently not well organized or clearly communicated to partners and stakeholders. For example, when considering habitat conditions, the attributes may be the number of stream miles available, the quality of the habitat in those stream miles, and the number of barriers to fish migration. For water supply, the attributes may be groundwater elevations and summer baseflow levels. In addition to identifying the attributes, limiting factors and targets for each attribute will be determined to ensure that the targets are achievable given real-world constraints.

Task 4.3 Document process

The process for determining objectives and attributes will be documented and, along with results, will be circulated to the Partner Agencies for review. Also, this section will define the terminology and present a clear description of the Plan's hierarchy of vision, goals, and objectives. Upon approved by the Partner Agencies, the objectives will be circulated to the RWMG for review and comment. Final objectives and attributes will be described in the updated Plan.

5.0 EVALUATE WATER PLAN MANAGEMENT STRATEGIES

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$0

Local Match: \$14,030

Schedule: 2/2011 – 5/2011

The existing Plan addresses many, but not all, of the resource management strategies in the 2009 California Water Plan Update. The RWMG will consider all of the Strategies contained in the Water Plan for and evaluate strategies for their applicability to the Region.

Task 5.1 Document process used to evaluate water resources strategies

The RWMG will develop a process to evaluate each of the water resources management strategies for their applicability to the Region, to identify which strategies are being addressed, which need to be more fully addressed, and which are not applicable to the Region. The process and the outcome of the evaluation will be shared with stakeholders. Applicable strategies and the objectives they address will be described in the updated Plan. The Plan will also document the strategies deemed to be not applicable to the Region, such as Delta conveyance, CALFED surface storage, rainfall enhancement, and potentially others. Where applicable, potential impacts to greenhouse gas emissions from resource management strategies will be assessed, and strategies that mitigate climate change impacts will be identified. The process to identify resource management strategies (Task 5.1) will be supported by the prioritization study described under the project review process standard (Task 7).

Task 5.2 Develop Flood Management Strategy

The current Plan has a limited number of projects that directly address flood management, although there are a number of projects that provide indirect benefits for flood management through groundwater recharge, drainage improvement and stormwater management. The Plan update will summarize historical and current efforts for mitigating large flood events, including flood plain regulations, levee construction and maintenance, and a flood warning system. The County recently completed a Hazard Mitigation Plan for the Federal Emergency Management Agency (FEMA); the findings and recommendations of which will be incorporated into the Plan. It is expected that additional flood management strategies and projects will be identified and incorporated into the Plan.

6.0 ENSURE PLAN INTEGRATION

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$0

Local Match: \$0

Schedule: 9/2010 - 3/2012

The Region's stakeholders have a long history of developing integrated projects and programs. The Integrated Watershed Restoration Program (IWRP), a precursor to the existing IRWM effort, was initiated in Santa Cruz County by the Resource Conservation District along with state and local agency partners. IWRP is a novel, and highly effective, approach to addressing resource challenges.

Many of the proposed technical studies directly support improving integration of different objectives in the Region. For example, a technical study to determine the feasibility of re-distributing pumping or implement conjunctive use alternatives, supports an assessment of the potential for greater integration among the Region's water agencies. IWRP performs a similar function for watershed management by integrating recommendations from various plans and studies, such as total maximum daily loads and watershed assessments, to target and implement restoration projects.

7.0 REVISE PROJECT REVIEW PROCESS

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$30,000

Local Match: \$28,891

Schedule: 3/2011 - 12/2011

The Steering Committee developed a review process and accompanying matrix to evaluate and prioritize projects in the Plan. That process assessed each project based upon a suite of objectives and implementation criteria. This method was successful in identifying projects that: addressed objectives, demonstrated the highest degree of integration, and demonstrated readiness to proceed. This evaluation determined whether a project met an objective (yes or no), however it did not assess the *degree* to which that objective was fulfilled (e.g., on a scale of 1 to 5). The Plan update will quantitatively assess each project's capacity to achieve each objective.

Simple methods for measuring success will be developed (as described in Task 9) to track progress towards achieving objectives, which will provide feedback for future project selections. Initially, this method will be applied for projects within the San Lorenzo River watershed as a pilot to demonstrate process and applicability. Based upon the pilot phase, the method will be revised (if necessary) and used for the entire region.

Objectives will first be revised to ensure that they are measurable. Next, the RWMG will develop simple relationships between these objectives and measurable attributes (such as, pollutant concentrations for water quality; groundwater elevations for water resources). The RWMG will then evaluate the resource management strategies and projects for their ability to affect changes in those attributes. Finally, simple assessment tools will be developed to measure the selected attributes cost-effectively.

This process will be developed by adapting an approach developed for the Lake Tahoe lake clarity TMDL that has proven to be an effective method for effectively assessing performance. The TMDL was developed to combat diminishing lake clarity. However, through a continued process of prioritization, stakeholders were able to simplify the problem statement and identify the priority causes of impairments. Then, using hypotheses formulated from best available data and science, they were able to prioritize the most cost-effective and feasible actions that are assumed to best solve the problem and make progress toward the stated objectives. The assumptions were then tested through cost-effective monitoring methods that evaluated how well the projects are meeting their intended purposes. This approach worked effectively in Lake Tahoe and is supported by the Lahontan Regional Water Quality Control Board, local jurisdictions, the U. S. EPA and many non-governmental organizations. It is currently being considered for use in other regions of the state, including in the Napa River to address the sediment TMDL.

Task 7.1 Develop a work group

Santa Cruz County Environmental Health Services will act as the lead for this effort with the assistance of a consultant team. The initial task is convening a work group of interested stakeholders. The meeting will kick off the project, provide background, the concept, and describe how the methods have been used elsewhere, identify the goals, timeline, tasks, and solicit feedback from the work group. The work group will meet on a regular basis to review and discuss major work products or milestones.

Task 7.2 Identify priority projects

Using best available data and science, a simple linkage between implemented projects and the observed change in attributes will be summarized. Based on this analysis, a prioritization of the hypothesized most feasible and cost effective projects will be completed based on their ability to achieve the target condition for the objective. The intent is that science and data to aid in the identifying the projects with the greatest potential to meet the objective.

The process will evaluate the political and social acceptability of the strategy alternatives, with the goal of crafting a preferred strategy that will receive broad stakeholder support. The strategy will focus on the actions that have the greatest impact on the attributes with the greatest opportunity to achieve the target given available funding and resources.

Task 7.3 Document project review process

The process used to prioritize projects will be documented and disseminated to the stakeholder group for comments.

8.0 UPDATE IMPACTS AND BENEFITS SECTION

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$0

Local Match: \$14,943

Schedule: 8/2011 -12/2011

The updated Plan will contain a screening-level analysis of foreseeable impacts and benefits resulting from Plan implementation. Potential impacts and benefits that are inter-regional, relate to climate change, or are focused on Disadvantaged Communities (DACs) and environmental justice concerns will be provided special attention.

Task 8.1 Update specific project-related impacts and benefits

Impacts and benefits for specific projects will be identified. These could be short term, such as construction impacts, or they could be long term such as improving groundwater supply or reduction of greenhouse gas emissions. In each case, these will be determined in a general nature for each priority project. In part, the benefits will be assessed through the revised project prioritization process described in Task 7.2.

Task 8.2 Identify and evaluate impacts and benefits to specific groups

The Region has two disadvantaged communities, the City of Watsonville and the community of Davenport. Particular emphasis will be applied to the impacts and benefits analysis specific to these two areas. The RWMG will also consult with groups representing environmental justice concerns, and particular evaluation of benefits and impacts will be assessed for those communities. The RWMG will also consult with local Native American leaders and conduct a similar evaluation for those communities. The RWMG will also continue close coordination with adjacent regions to ensure that inter-regional impacts and benefits are identified and assessed.

9.0 FURTHER DEVELOP PLAN PERFORMANCE AND MONITORING METHODS

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$45,000

Local Match: \$12,646

Schedule: 3/2011 – 12/2011

The Region places particular emphasis on the development of a method to assess plan performance. The RWMG developed a comprehensive monitoring program in response to requirements to document and evaluate overall IRWM effectiveness. The existing Coordinated Monitoring Plan lays out a suite of monitoring activities that evaluate each project to ensure that it is implemented according to the goals, outputs and targets contained in its Performance Assessment and Evaluation Plan (PAEP). Such an assessment ensures that the project is implemented as intended and funds spent appropriately. Further, the Monitoring Plan lays out a process by which the overall IRWM's effectiveness is evaluated. While limited in scope, this analysis looks closely at key attributes and performs statistical analysis to determine if the Plan is influencing environmental conditions reflecting IRWM objectives. Further, through the monitoring program, several documents including a Quality Assurance Project Plan (QAPP) and a Quality Assurance Program Plan (QAPrP) were developed to establish standards, procedures, objectives and goals for water quality monitoring.

Lessons from the current monitoring program is that it is difficult to evaluate effectiveness with our existing tools, particularly in light of reduced resources and a high level of variation in monitored parameters and the environmental conditions that affect those parameters. Monitoring methods will be closely related to the work done to update the objectives and evaluate projects based on their ability to achieve those objectives. The monitoring program will be updated to identify, adopt or adapt monitoring methods to cost-effectively track attributes that indicate if the objectives are being achieved

Task 9.1 Identify Key Monitoring Elements

The RWMG will identify key monitoring efforts necessary to adequately inform how well plan implementation is progressing towards achieving the objectives. The RWMG will recommend modifications to existing programs, as necessary, and identify gaps where additional data is needed. This work will be based on the results of the monitoring conducted to evaluate the performance of the Proposition 50 IRWM Implementation grant.

Task 9.2 Develop simple assessment tools

Where monitoring is lacking, the RWMG will develop simple assessment tools to evaluate key attributes. These tools will be simple but reliable and scientifically accurate tools to quantify the benefits of actions, directly linking to stated objectives. In the Lake Tahoe example, a number of tools have been developed to directly assess priority projects. For example, several Rapid Assessment Methods have been developed, including assessments for Best Management Practice (BMP) condition; stream habitat condition, and road condition. Similar approaches will be adapted or developed for the Santa Cruz Region.

10.0 ENHANCE DATA MANAGEMENT

Lead Agency: Santa Cruz County, Environmental Health Services
Grant Request: \$15,000
Local Match: \$6,898
Schedule: 5/2011 – 12/2011

Many types of environmental data could be used to evaluate IRWM effectiveness. As described above, the County Environmental Health Services developed a monitoring plan and a quality assurance project plan that describe how data are to be evaluated and used in assessing plan effectiveness. The monitoring plan identifies specific data that should be collected through project implementation. The plan identifies ideal quality standards to ensure reliable collection and use of data. Data management practices will be updated for compliance with IRWM Plan Standards.

Task 10.1 Develop data management system

This task will develop a consistent set of data management protocols and conventions throughout the IRWM process to ensure that data collected as part of IRWM projects are accessible and useful to stakeholders and able to be integrated to regional and statewide databases. This effort will build upon the data compilation and management being conducted under the Proposition 50 IRWM grant by coordinating with adjacent regions, and ensure that data conforms to applicable state standards.

The diversity of data types that are generated by IRWM projects presents substantial data management challenges. Data management standards included in the Plan will be based upon established statewide efforts (e.g., SWAMP, GAMA) whenever appropriate. This effort will build upon the data management protocols developed for the Proposition 50 grant projects. These procedures will maximize the opportunity that data generated by IRWM projects to be compatible with regional and statewide efforts. Environmental data sets such as water and sediment quality, habitat and biological measurements, groundwater quality and land management improvements are valuable tools for understanding the health and function of watershed systems. The Santa Cruz IRWMP will work with partners in the Central Coast funding area, particularly with the Greater Monterey Region, who has put significant effort into a data management system.

11.0 DOCUMENT PLAN FINANCING

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$0

Local Match: \$4,598

Schedule: 8/2011 – 12/2011

The RWMG will update this section to ensure that IRWM Plan financing is clear and transparent to stakeholders. IRWM funding requirements can be broken out into three main categories: project implementation, operations and maintenance, and administration. Project implementation is generally funded by the project lead agency through a combination of fees, enterprise funds or other public financing and may be augmented by grants or other sources. Operations and maintenance is generally funded by the project lead agency through public financing (e.g., fees, enterprise funds, special district funds). IRWM administration is generally supported through in-kind support from the Partner Agencies and the County of Santa Cruz, Environmental Health Services. Watershed groups and other smaller stakeholders generally utilize a combination of in-kind support, volunteer assistance, and grants.

Task 11.1 Identify alternative funding scenarios

The RWMG will develop a funding strategy for IRMW Plan that is not dependent upon state or federal grant funding, but rather relies principally upon local resources to support IRWM efforts. Various alternatives to the existing funding structures described above will be explored, to ensure that the IRWM effort is sustained, particularly in the absence of grant funds. One option might be agency contribution to the County, the RWMF, or other entity to continue to perform a centralized coordination effort. The results will be clearly documented in the Plan.

Task 11.2 Document funding scenarios in tabular format

The finance table described on page 59 of the guidelines will be used to describe the overall funding scenario for the IRWM projects, as well as for the Plan as a whole.

12.0 DOCUMENT TECHNICAL ANALYSIS

Lead Agency: Santa Cruz County, Environmental Health Services
Grant Request: \$0
Local Match: \$0
Schedule: 8/2011 - 12/2011

All of the data and technical analyses used in the development of the Plan will be documented and referenced. Much of this information is already available on the Santa Cruz IRWM website: <http://www.santacruzirwmp.org/resources/various-agency-documents>.

Much of the approach for technical analyses is generally identified in the project prioritization (Task 7), monitoring (Task 9) and data management (Task 10) sections. If gaps are identified during the Plan development process, additional technical analyses will be addressed in this section as part of the Plan update process.

13.0 EVALUATE RELATION TO LOCAL WATER PLANNING

Lead Agency: Santa Cruz County, Environmental Health Services
Grant Request: \$7,000
Local Match: \$4,598
Schedule: 4/2011 - 10/2011

The Plan was initially developed by incorporating the needs identified in local water planning documents and technical studies, including: urban water management plans, watershed management plans, wastewater management plans, integrated water plans, recycled water, groundwater management, water resources, and environmental enhancement plans. The relevance of these documents to the Plan is discussed and summarized in the existing IRWM Plan. The RWMG will continue to incorporate local planning efforts and dialogue with water planning agencies.

Task 13.1 Assess dynamics between the Plan and local water planning documents

The RWMG will allocate staff to identify any new local water planning documents to ensure that local water planning elements are adequately updated in the Plan. Similarly, staff will identify areas of inconsistency or inadequacy and recommend changes to the Plan, the local planning document, or both to ensure agreement. Staff will work with the participating water agencies to address inconsistencies.

14.0 EVALUATE RELATION TO LOCAL LAND USE PLANNING

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$7,000

Local Match: \$4,598

Schedule: 4/2011 - 11/2011

There is an ever-increasing need to integrate water, land use, and climate action planning. The Plan was developed in coordination with local jurisdictions and incorporated local land use planning documents, such as General Plans, produced by various agencies in the Region. Since 1980, the Santa Cruz County General Plan has included numerous provisions for water resource protection and management. Local water supply plans also address projected growth and land use changes as contained in County and city planning documents and growth management programs. The incorporation of these documents to the IRWMP is summarized in the existing IRWM Plan.

Task 14.1 Conduct local land use policy assessment

The RWMG will allocate staff to review land use planning documents and climate action plans to ensure that planning elements are adequately reflected in the Plan. Similarly, staff will identify areas of inconsistency or inadequacy and recommend changes to the Plan, the local planning document, or both to work towards consistency. Staff will work with the relevant lead agency to address needed Plan updates.

15.0 CONTINUE STAKEHOLDER INVOLVEMENT

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$0

Local Match: \$14,944

Schedule: 10/2010 – 5/2012

There is a long history of stakeholder involvement in the development of plans and projects in Santa Cruz County. IRWM Planning in region continues this tradition by conducting outreach to facilitate and encouraging stakeholder engagement. A stakeholder outreach plan was developed by the RWMG as part of the Proposition 50 grant. This document presents a variety of avenues to make stakeholders are aware of the Plan and outlines opportunities for participation. The RWMG uses a website (www.santacruzirwmp.org) and a listserv to disseminate information.

Task 15.1 Continue outreach through workshops, meetings, website and listserv

The ongoing outreach efforts such as workshops, public meetings, the website and listserv will continue. Workshops and meetings will occur to inform and gather feedback from stakeholders, for example, to comment on draft versions of significant planning elements such as goals and objectives. Meetings may also occur to inform stakeholders about progress and accomplishments. The website and the listserv will continue as the main avenues disseminating information.

Task 15.2 Document stakeholder outreach and results

The RWMG will document stakeholder outreach efforts, including the process to identify and engage stakeholders and how the public notification of the IRWM. Particular emphasis will be applied to ensure that DAC are engaged, environmental justice concerns are addressed, and Native American communities are given the opportunity to participate.

16.0 UPDATE PLAN COORDINATION SECTION

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$0

Local Match: \$1,437

Schedule: 01/2011 – 12/2012

The RWMG will work with stakeholders to ensure that, to the extent feasible, projects are coordinated to maximize efficiencies and avoid conflicts between projects or partners. The RWMG has various mechanisms in place to ensure coordination takes place, including:

- Monthly meetings of water managers to discuss current projects and priorities;
- Steering Committee and Partner Agency meetings – Each group meets on an as-needed basis to ensure coordinated plan development and implementation;
- Central Coast Funding Area Meetings – the Santa Cruz Region is a regular participant in funding area meetings and conference calls;
- Roundtable of Regions Conference Calls – the Santa Cruz Region also regularly participates in the roundtable of regions conference calls;
- Blue Circle watershed meetings – a forum hosted by the Resource Conservation District of Santa Cruz County for watershed enthusiasts to get together and talk about the work that they are doing;
- Community meetings – the City of Santa Cruz and Soquel Creek Water District have hosted a series of community meetings focused on the development of the desalination projects, including a history of planning and technical studies, an analysis of alternatives to desalination, and other related topics;
- Stakeholder Meetings – as described in the Outreach Plan, the RWMG has conducted a series of stakeholder workshops to provide updates on the status of the Plan and current implementation projects.

Task 16.1 Document coordination activities

Activities that serve to facilitate coordination within the region and between neighboring regions will be documented.

17.0 DEVELOP CLIMATE CHANGE STRATEGY

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$31,500

Local Match: \$56,905

Schedule: 1/2011 – 9/2011

The RWMG is currently working with the U.S. Geological Survey (USGS) to identify potential impacts of climate change on local water supply and aquatic habitat. USGS researchers are utilizing scaled-down global climate change models and local basin characterization models to predict future patterns of rainfall, streamflow, and recharge for the Region. The RWMG seeks to build on this study with Proposition 84 funds to assess additional vulnerabilities, including the effects of sea level rise, evaluating potential adaptation and mitigation strategies, evaluating the potential impacts of recommended projects, and developing an overall strategy in coordination with other climate change planning efforts being conducted in the state and region.

Task 17.1 Assess Impacts on recharge and streamflow

This task summarizes the results of the USGS study regarding impacts on recharge, streamflow, groundwater storage, storm runoff, and flooding as they relate to development and implementation of the Plan. Projected changes in seasonal water demand resulting from climate change will be identified. This will be followed by an analysis of possible changes to design and operational assumptions about resources, system demands or performance requirements, and operational constraints. The synthesis of findings will not make policy recommendations, but where appropriate, will indicate the types of actions and policies that may be affected or necessary by potential climate change scenarios.

Task 17.2 Assess potential impacts from sea level rise

Local and regional projections of the extent of sea level rise will be compiled to identify potential consequences for the Region. This will include an analysis of potential impacts on water supply infrastructure, resources, flood hazard, and other water-resources.

Task 17.3 Review California Climate Adaptation Strategy Document

The RWMG will inventory existing climate change adaptation and mitigation actions taking place within the Region, and evaluate those efforts with respect to strategies outlined in the 2009 California Climate Adaptation Strategy. Climate change inventories and strategies are already under development for the Monterey Bay region, Santa Cruz County, and the local municipalities.

Task 17.4 Strategy development

Tasks 17.1 – 17.3 will support the RWMG in identifying potential climate change strategies and defining the potential costs, benefits, and risks of the potential approaches. Strategies that address multiple objectives beyond climate change and result in multiple benefits will be favored. By focusing on no regret strategies the Plan will minimize implementation costs should climate change impacts not develop as severely as predicted. Policy statements will consider the cost and benefit of incorporation of climate change in a holistic approach to watershed management. This work will be conducted in consultation with the DWR handbook (release pending) and the 2009 California Climate Adaptation Strategy Document.

18.0 CONDUCT TECHNICAL STUDY – AROMAS AND PURISIMA BASIN MANAGEMENT

Lead Agency: Central Water District

Grant Request: \$200,000

Local Match: \$100,000

Schedule: 2/2011 – 12/2011

The grant will help fund the planning and feasibility analysis for the redistribution of groundwater pumping between the Aromas and Purisima Formations near the boundary between the Central Water District (CWD) and the Soquel Creek Water District (SqCWD). Groundwater from both aquifers is the sole source of water supply for both. The Aromas is currently the primary source for CWD, but the Aromas currently is subject to seawater intrusion, elevated levels of Chromium VI (Cr-6), and substantial overdraft to the east in the Pajaro Valley. This study will evaluate the potential for shifting more pumping from the Aromas to inland portions of Purisima Formation in the CWD area to better balance the pumping and avoid future treatment costs for Cr-6 removal.

CWD has two well fields: the northern Cox Road well field in the Purisima Formation and the southern Rob Roy well field in the Aromas Formation (see Figure 2.) Currently, most of the water supply is extracted from the Rob Roy well field, with little treatment other than disinfection required.

Both aquifers have water quality issues; the Purisima groundwater must be treated for high levels of iron and manganese and the Aromas has elevated levels of Chromium VI (Cr-6) and nitrates. The California State Department of Public Health is in the process of establishing the maximum contaminant level (MCL) for Cr-6; a naturally occurring compound found in the Aromas Formation. It is unlikely that the concentration of Cr-6 in groundwater from the Rob Roy well field, which draws groundwater primarily from the Aromas, will meet the future MCL. The only proven method to treat Cr-6 in water is reverse osmosis; an expensive process to both develop and maintain.

By redistributing the bulk of groundwater production to the CWD inland Cox Road Well Field, CWD could lessen its influence on depressed coastal groundwater levels while also providing water for blending with the Rob Roy well water to lower the concentration of Cr-6. The redistribution could also provide the opportunity for CWD to provide more water to the SqCWD thereby allowing SqCWD to reduce its pumping near the coast. However, because the

Cox Road wells draw groundwater primarily out of the Purisima, CWD would need to build a treatment facility for the iron and manganese, if there is enough water likely available in that area to justify the cost.

Task 18 will be led by Central Water District with the assistance of a consultant and coordinated through a technical advisory committee (TAC) comprised of groundwater basin representatives. TAC members will include representatives from CWD, SqCWD, Santa Cruz County, other participating stakeholders. The project could be initiated immediately upon a grant award.

Task 18.1 Evaluate the sustainable yield of the local Purisima Formation

A consultant will conduct an investigation of the Purisima Formation in the vicinity of Cox Road Well Field to determine the hydrogeologic characteristics of the region and make an estimate of the aquifer sustainable yield. The study will include an analysis of the local geologic units and structure, local hydrology, construction and production details of the Cox Road Wells and a compilation of local private well data (number and locations in the region). The deliverable will be a report with accompanying maps and tables documenting the hydrogeologic findings. Two meetings between the consultant and technical advisory committee (TAC) will occur, one at the start of the task and another prior to finalizing the report.

Task 18.2 Evaluate the condition and capacity of the Cox Road wells

A contractor will conduct tests to measure the performance and problems of the wells (specific capacity) of the Cox Well Field. Tests will also help to determine the transmissivity of the aquifer. The contractor will produce video recordings of the wells prior to gauging the specific capacity of the wells. Additionally, water samples will be taken at all of the screened areas in order to evaluate the water quality. The contractor will install groundwater level transducers in order to ascertain water levels during all processes.

Task 18.3 Prepare well rehabilitation / re-drill cost estimate

A consultant will evaluate the results of the Cox Road Well Field specific capacity tests, water quality tests, and physical condition of the wells. This information will be used to determine the best and most effective method for rehabilitation and/or re-drilling of the wells. Environmental sensitivity is a concern in determining a method for well rehabilitation. It is expected that upon completion of the evaluation, the CWD will be presented with an informed conclusion regarding the feasibility of either chemical/mechanical well rehabilitation or installation of a new well.

Task 18.4 Evaluate type and siting of a water treatment plant

Using the results of the previous work completed by consultants and contractors, an engineering consultant will assess the data in order to recommend the type of water treatment

plant that will meet the current and future needs of the CWD and its regional partners. To determine the best water treatment method the following issues must be addressed: water quality, facility size and location, energy efficiencies, waste disposal and/or opportunities for recycling and optimum water production yield.

Task 18.5 Groundwater management analysis

A consultant will analyze the work completed in Task 18.1 as well as data available from CWD and the SqCWD. The consultant will develop scenarios that will most effectively manage groundwater in the region (i.e. produce groundwater in a more sustainable manner that will not lead to severe pumping depressions, seawater intrusions, or deplete the groundwater storage). The deliverable will be a report with accompanying maps and tables documenting the management scenarios and providing recommendations on the most efficient scenario(s). Two meetings between the consultant and technical advisory committee (TAC) will occur, one at the start of the task and another prior to finalizing the report.

Task 18.6 Final report

The Consultant will summarize all the work completed in Tasks 18.1 through 18.5 in a draft report for the TAC to review prior to the preparation of a final report. Following approval by the TAC, the consultant will prepare a final report that includes an executive summary. The consultant will make the final document available in a digital format as well as assemble hard copies of the report.

19.0 CONDUCT TECHNICAL STUDY – SANTA MARGARITA GROUNDWATER MODELING

Lead Agency: Scotts Valley Water District

Grant Request: \$221,519

Local Match: \$72,443

Schedule: 1/2011 – 12/2012

Update of the groundwater model (Model) for the Santa Margarita basin is essential to support the development of in-lieu recharge, conjunctive use, augmented recharge, and other management strategies to restore groundwater levels and stream baseflow in Scotts Valley and the lower San Lorenzo River Watershed (**Figure 3**).

During the summer months and drought periods, much of the baseflow of the tributary streams is sustained by groundwater discharge. These cool water flows are key for sustaining water depths and temperatures that are needed to sustain habitat for key fish populations including Coho salmon and steelhead trout. The primary tributary draining this area, Bean Creek, has been designated by NOAA Fisheries as a critical reach to support Coho recovery. Understanding and managing the dynamic groundwater and surface water interactions requires an integrated quantitative tool for the level of evaluation needed for future management.

Implementation of an updated Model is needed at this time for several reasons. First, it would coincide with completion of the Conjunctive Use, Phase I study (described in Task 20), providing an improved methodology for evaluating the benefits of project alternatives. Second,

significant new geologic, hydrogeologic and groundwater data have been collected since the Model was developed. These data will help update the conceptual understanding of this geologically complex basin and help address areas of noted deficiencies in the 2006 Model. Third, the empirical nature of a groundwater model requires that it be updated and calibrated periodically. The 2008 and 2009 SVWD annual groundwater management program reports recommend a three- to five-year schedule, with the first comprehensive update no later than 2011.

The project will be administered by Scotts Valley Water District and coordinated through a technical advisory committee (TAC) comprised of groundwater basin stakeholder representatives. TAC members will include representatives from San Lorenzo Valley Water District, Santa Cruz County, other participating entities from the Santa Margarita Groundwater Basin Advisory Committee, and other stakeholders. The proposed update would emphasize improvements with respect to groundwater-surface water interactions and applicability across the entire basin. The project could be initiated immediately upon a grant award. The majority of the technical work will be completed within 18 months and the entire project will be completed within 24 months.

Task 19.1 Basinwide data compilation

The key aspect of the proposed technical study would be to compile the large volume of hydrogeologic data generated by the various stakeholders to prepare a detailed hydrogeological conceptual model of the Basin. These data would include new geologic data from recently drilled deep wells; incorporate and update groundwater elevation, streamflow and other hydrologic data since 2006 from across the entire basin area. The data search would gather any additional data in the form of geologic logs, geophysical logs, groundwater elevation or other data from areas outside of SVWD that would benefit the model development.

Task 19.2 Hydrogeologic conceptual model update

The purpose of this task is to develop a sound, defensible hydrogeologic conceptual model based on the data collected in the previous task that will serve as the foundation for defining the approach for model development and application.

Particular emphasis will be placed on updating the conceptual model in the geologically complex southern half of the Basin. *This area has experienced over 200 feet of groundwater-level decline over the past 30 years*, and has been impacted by numerous contaminant plumes. Due to the geologic complexity, investigators and oversight agencies are having difficulty characterizing the aquifer for groundwater recharge and contaminant migration pathways. Therefore, special attention will be placed on improving the conceptual understanding in this area. This region is also being evaluated for a conjunctive use project that might recharge groundwater to address the overdraft condition (see Task 20). As part of these studies, a large volume of subsurface geologic and hydrogeologic data has been generated. A more detailed stratigraphic analysis of the southern Basin would be incorporated into the updated Model. This improved understanding will help to assess the effects of recharge on the aquifer, contaminant plumes and groundwater outflow to proximal streams.

Task 19.3 Model setup and calibration

A Model Development Plan will be developed. This plan provides a clear roadmap to translate the hydrogeology and water budget from the conceptual model into the necessary aquifer parameters and boundary conditions required for the numerical model. The plan will identify the source of the data and the format required for model input for all model input files. This step allows us to recognize potential problems and issues early in the model development process and take proactive steps to solve such issues early and within the project budget. The Model Development Plan will guide the Model development efforts. The Model Development Plan will be reviewed by SVWD, the TAC, and outside experts.

The Model setup will be facilitated by utilizing the previous regional groundwater flow model. The data from tasks 19.1 and 19.2 will be used for this task. Model setup consists of the parameterization of the aquifer characterization data, model boundary conditions, calibration targets and other data. The various model input files will be developed using GIS databases developed in the previous task to build appropriate model input files. These GIS files will be used to map aquifer property and boundary condition data into the Model.

Model calibration will be performed by comparing the ability of the model to simulate historical groundwater elevations over the base period. The calibration will be evaluated through a statistical comparison of simulated and observed groundwater elevations, a visual comparison to groundwater elevation maps, and an evaluation of hydrographs for a select set of key wells in the area.

Task 19.4 Model scenarios

For this task, the Model will be used as a predictive tool to evaluate future trends in groundwater levels to help manage and optimize future groundwater usage in the basin. For this analysis, five (5) future-case model scenarios are proposed. These scenarios will be developed in conjunction with the TAC. One scenario will be a baseline scenario that will be developed for comparative purposes for all model scenarios. The remaining four (4) scenarios are anticipated to be regional in scope. The results of this analysis will provide a basis to determine the relative water balance for different groundwater management and other scenarios. These results will evaluate changes in groundwater levels and surface water discharges over time. Examples of potential Model scenarios include the following:

- Changing groundwater extraction based on urban water management plans or other planning documents;
- Evaluating impacts of severe droughts by varying groundwater recharge based on a revised precipitation table;
- Modifying long-term groundwater pumping by shifting or adding new pumping wells to the model; or
- Conducting sensitivity analyses by modifying the hydraulic conductivity or other parameters for multiple property zones;
- Evaluating the impact of potential groundwater management practices;

- Analyzing changes in water quality in response to a specified condition; or
- Evaluating the interaction of changing two major parameters such as pumping and recharge in a single model scenario;

Task 19.5 Technical report

The technical report will detail the construction, calibration, and evaluation of the updated Model. The Technical Report will include written text, tables, and figures that describe the work from the preceding tasks. The technical report is anticipated to include:

Task 19.6 Technical advisory committee

Project implementation would be coordinated through a TAC similar to the one assembled for the initial model development. The objective would be to obtain buy-in from all participants. Such buy-in is considered vital if the model is to be used with confidence for evaluating interagency projects and projects with basin-wide implications.

20.0 CONDUCT TECHNICAL STUDY – CONJUNCTIVE USE AND WATER TRANSFERS – PHASE II

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$164,500

Local Match: \$58,805

Schedule: 3/2011 – 3/2012

Current water demand exceeds sustainable supply in most parts of the Region, resulting in overdrafted aquifers, diminished streamflow, inadequate long-term supply, and environmental degradation. The purpose of the conjunctive use study is to utilize technical information and develop projects and strategies for improved management of our limited water resources. This work will develop several water resources strategies and will support addressing additional IRWM Plan Standards (such as Integration and Coordination). This project will be supported by the development of an updated Santa Margarita groundwater model, described in Task 19. This project will have the following benefits:

- Increase water supply – this project will identify ways in which to enhance water supply in the basin by capturing surplus winter flows that are not presently utilized or needed for habitat
- Develop conjunctive use management – conjunctive use management is likely a very beneficial strategy for the region
- Protect groundwater basins – the main purpose of the project is to restore groundwater levels to support sustainable use and eliminate the threat of seawater intrusion
- Watershed management – better management of groundwater basins and streamflow diversions will likely increase stream baseflow, which will benefit threatened and endangered fish populations.

Phase I

Two Phase I technical studies are near completion. These were funded with Proposition 50 funds, and the main outcomes were to evaluate streamflow, fishery regulations, existing infrastructure and other constraints to determine the feasibility of large-scale water exchanges and aquifer recharge enhancements to mitigate the water management problems in the lower San Lorenzo River / Scotts Valley area and to evaluate the potential use of interties among all the water agencies, including the Soquel-Aptos area. In addition to being a critical water supply watershed, the San Lorenzo River is home to numerous threatened or endangered species, including the Coho salmon. Portions of the San Lorenzo River watershed have been identified in the draft Coho recovery plan as critical to the species recovery. Increasing stream baseflow is one of the main strategies identified in that plan.

The studies identified three preferred management strategies that warrant further analysis:

1. Capturing stormwater and for on-site recharge and runoff management
2. Conducting in-lieu recharge and water transfers
3. Large-scale constructed recharge facilities and surface percolation of excess (treated) streamflow

Capturing stormwater for on-site recharge will be implemented through site-specific building designs. Related to Phase I, the County is installing pilot recharge restoration projects and working to revise polices to require maintenance and restoration of on-site recharge of runoff in the County and the City of Scotts Valley. Implementation of this recommendation will consist of dispersed, site-specific projects, likely on private property, implemented over time as building applications or remodel work is submitted to the City or County.

Alternatively, the conjunctive use and in-lieu recharge management strategies are large-scale projects that will involve exchanges of water among the water agencies. Phase I identified cursory technical, legal and regulatory constraints, as well as identified existing infrastructure that might be used or required to implement these strategies. The next steps to implement these strategies includes developing engineering-level designs and cost estimates and addressing legal and regulatory constraints.

Phase II

Phase II of the conjunctive use project will build upon Phase I to identify preferred projects under the in-lieu and recharge management strategies, develop preliminary designs and address specific legal and regulatory constraints for each strategy. **Figure 4** displays the general study area, including boundaries for the Scotts Valley and San Lorenzo Valley Water Districts. Santa Cruz County EHS is the lead agency for this Task, and work will be conducted by staff and a consultant. This work will be conducted using Proposition 84 funds and in-kind match.

Task 20.1 Review phase I project work and recommendations

A consultant will review the work products and recommendations completed under Phase I to become acquainted with the project and acquire information needed to carry out subsequent project tasks. After this review, the consultant will convene the Phase I technical advisory

committee to identify preferred project(s) within the conjunctive use and in-lieu recharge management strategies. The preferred project(s) will be determined through a set of criteria that will include the ability to achieve the objective, cost, technical feasibility, political support, and estimated benefit, among others. Each of the management strategies has several different ways in which it could be accomplished (depending on source, method of transport and place of use for water). The preferred project(s) will be examined further in the following tasks after a fatal flaw analysis is performed to ensure project viability.

Task 20.2 Develop preliminary project engineering designs

The consultant will develop preliminary engineering designs for the preferred projects. The stormwater capture and recharge projects would be implemented on a site by site basis, so those designs would be developed through new building or remodel applications.

The in-lieu and recharge project designs will incorporate all the pertinent infrastructure identified in Phase I and be of sufficient detail that an engineering-level cost estimate can be made for each project. After the consultant completes a draft of the project designs, the consultant and TAC will review the designs.

Task 20.3 Address legal and regulatory issues

The consultant will work with staff to address specific legal and regulatory issues pertinent to each of the projects. The consultant will prepare a memorandum discussing the legal and regulatory issues and will identify any fatal flaws associated with each project, which will be reviewed by the TAC. The memorandum will lay out all the necessary permits, regulatory hurdles, and other critical milestones (e.g., property acquisition) that need to be addressed prior to project implementation. Fish habitat assessments will be performed as needed to confirm the amount of winter flows that can be diverted under different seasonal conditions without adversely affecting fish populations and to demonstrate the amount of fishery benefit that will be expected to result from increased baseflows. The consultant will prepare preliminary permit applications and CEQA analysis for the necessary permits following after receiving approval to proceed.

Task 20.4 Develop engineering-level cost estimates

The consultant, using the engineering designs completed in Task 20.2 and addressing the legal regulatory constraints identified in Task 20.3, will prepare engineering-level cost estimates. The consultant and TAC will review the cost estimates.

Task 20.5 Prepare a cost-benefit analysis of each projects

The consultant will conduct a cost-benefit analysis to compare the engineer's cost estimate to the estimated value of the increased water supply and dry season stream baseflow. This analysis will take into account potential impacts of climate change and regulatory restrictions to water use from the San Lorenzo River. Following the preparation of the cost benefit analysis the consultant and TAC will meet to review the figures and recommendations. The deliverable will be a brief report on the analysis and recommendation with pertinent tables and figures.

21.0 CONDUCT TECHNICAL STUDY – WATSONVILLE SLOUGHS HYDROLOGY

Lead Agency: Resource Conservation District of Santa Cruz County

Grant Request: \$199,056

Local Match: \$45,200

Schedule: 1/2011 – 12/2012

The Watsonville Slough system and its associated watershed extend from the City of Watsonville to the mouth of the Pajaro River. The project's study area comprises generally the lower to middle portion of the slough system, from approximately Shell Road east to Highway 1 (**Figure 5**). The proposed study will benefit water supply, flood management, water quality improvement and habitat improvement in both the Santa Cruz IRWM Region and Pajaro IRWM Region.

The Watsonville Sloughs are a highly valued and unique freshwater wetland resource on the Central Coast. The Slough wetland complex has been modified significantly over the last 100 years, both in size and function. Agriculture and urban uses have encroached on wetland boundaries, portions of the system have been drained to allow farming, and urban development encircles the upper watersheds of three principle sloughs in the six slough system. There are significant draws of deep groundwater to support these activities and there are subsurface drainage structures that discharge shallow groundwater back to the sloughs. Many hydrologic control structures have been installed on surface waters throughout the watershed, including pumps, gates, culverts, bridges, and road crossings. Many of these structures modify the rate at which water flows through various portions of the system, dewatering habitat in some areas while contributing flooding in others. In addition to these control structures and extensive upstream/upland development, recent conversion of highly erodible rangelands to strawberry production has lead to further modifications of the hydrologic system with elevated erosion rates resulting in deposition of fine sediments into the sloughs and drainage systems.

Prime farmland and infrastructure have been lost due to chronic flooding of lowland areas within the Sloughs. In addition to the acres of farmland permanently or seasonally inundated by chronic flooding, an innovative water supply project focused on capturing freshwater from the Harkins Slough and using it to recharge the depleted coastal aquifer no longer functions as designed due to excess rates of sedimentation.

This hydrologic study will provide essential information to develop and implement strategies to improve management of the Watsonville Sloughs wetlands ecosystem. Proposed projects have been repeatedly delayed due to the lack of critical information on the hydrologic functioning of this complex system. The goal of this project is to conduct a hydrologic assessment of surface and shallow groundwater flows in the sloughs to support the development of additional resource management strategies for the Watsonville Sloughs. These strategies include enhancement of water supply, flood management, ecosystem restoration, water quality, wetland restoration, and recreational opportunities. All of these strategies will serve to support and stimulate the economy in this disadvantaged community.

Task 21.1 Data collection and project organization

This task involves collecting the data necessary to characterize the hydrology and hydraulics of the lower Watsonville Sloughs. The technical consultant will develop a data collection plan with input from a Technical Advisory Committee, which will also be involved in oversight of other aspects of the study.

The County recently acquired a high-resolution LiDAR topographic data set for the Study Area, and portions of Watsonville Slough were recently surveyed for the Middle Watsonville Slough Drainage and Habitat Management Program. For hydrodynamic modeling and quantification of land subsidence, the LiDAR and Middle Watsonville ground survey data need to be supplemented with detailed topographic data of water control structures (e.g., culverts, weirs) and bathymetric data for portions of the Study Area that were inundated during the LiDAR flight. Bathymetric survey will include the main Watsonville Slough thalweg and storage areas in lower Harkins and Struve Sloughs. The survey data will be collected by a Professional Land Surveyor using Real-Time Kinematic (RTK) GPS equipment; bathymetric data may be collected with sonar equipment. These data will be merged with the LiDAR data set to produce a complete topographic map of the lower Watsonville Slough system.

Surface and groundwater data will be collected throughout the Study Area to quantify hydroperiod, surface-groundwater interactions (flux), response to storm events, and effects of infrastructure and water management. These data are also necessary to develop the water balance and calibrate the hydrodynamic model. Monitoring of surface and groundwater will build on recent data collected to support the restoration efforts of the Middle Watsonville Slough Drainage and Habitat Management Program. Surface and groundwater data will be collected using pressure transducers that record water stage. A minimum of four (4) paired surface-groundwater data collection stations will be established over the Study Area. A conceptual diagram of the surface – groundwater monitoring approach is depicted in **Figure 6**. Water level data will be collected between March 2011 and October 2012 (~18 months). Data will be collected by the technical consultant in collaboration with PVWMA staff.

Task 21.2 Hydrologic and hydraulic modeling

This task involves characterizing the hydrology and hydraulics of the Study Area through two key subtasks: development of a water balance to identify and account for the various hydrologic inputs and outputs in the Study Area; and, development of a hydrodynamic model to simulate and analyze existing conditions as well as potential project alternatives at the Study Area. Together, the water balance and the hydrodynamic model will provide a robust analytical package to support several project applications in the region.

The water balance is a fundamental component of the hydrologic study as it has broad reaching implications for maintenance and management of habitat functions, water quality, water supply/recharge, flood protection, agricultural land use and public health (i.e., mosquito abatement). A preliminary water balance for the sloughs was developed by Questa in 1995. That water balance is now outdated for several reasons including recent changes in land use (primarily urbanization of Watsonville and conversion of uplands from rangeland to irrigated

agriculture), the establishment of PVWMA's Coastal Distribution System, the development of the City's new wastewater recycling plant, changes in flood management practices (i.e., pump operations), and potential effects of land subsidence.

Under this study an updated water balance will be developed that considers the major inputs and outputs (losses) in the slough system. Inputs to be estimated include streamflow runoff, direct precipitation, urban stormwater discharge, residential septic discharge, groundwater discharge, and agricultural returns. A rainfall run-off model (e.g., HEC-HMS) will be developed to estimate watershed inputs. Hydrologic outputs to be identified in the water balance include outflows to the ocean, PVWMA withdrawals, groundwater recharge, evapotranspiration, infiltration, and agricultural withdraws. The water balance will be organized to depict the hydrologic budget on a monthly basis. The water balance will be developed by the technical consultant team and reviewed by the TAC. A technical memorandum will be prepared that details the methods and results of the water balance. The final water balance, which incorporates the data from all surface and groundwater monitoring, will be included in the Final Hydrology Study report. Once completed, the water balance can be used as a tool to design reach and landscape-scale habitat restoration activities, and evaluate how future land use practices and water supply scenarios may affect slough hydrology.

A hydrodynamic model(s) will be developed to evaluate (1) surface water elevations in the Study Area during storm events, (2) the effects on existing flow impediments (e.g., culverts, roads) on drainage and circulation, (3) the effects of seasonal pumping on the hydroperiod and circulation at the slough, and (4) target elevations for wetland restoration/enhancement surfaces. Surface water and groundwater interactions will also be considered in the model, as well as the effects of vegetation and sediment accumulations. More than one hydrodynamic model may be developed to consider different hydrologic scenarios (e.g., flood stage modeling versus dry season surface groundwater interactions). The model will extend from Highway 1 to Shell Road with cross-sections spaced at approximately 500-foot intervals, with more closely spaced sections (150-foot interval) in the more problematic reach between Highway 1 and the UPRR railroad tracks. The more detailed model at this location will be used for the design of the Middle Watsonville Sloughs wetland restoration/enhancement project, a number of components of which are already in the initial planning stages with the Land Trust of Santa Cruz, the Resource Conservation District of Santa Cruz, and the Natural Resources Conservation Service. The model(s) will be developed by the technical consultant team and reviewed by the TAC; the TAC will also be involved in the model selection process. A technical memorandum will be prepared that details the methods and results of the hydrodynamic modeling. The final modeling results will be included, together with the water balance results of Task 21.1 in the Final Hydrology Study report. The hydrodynamic model(s) will be available to public and private interests that seek to analyze various habitat restoration, water quality, water supply, and/or flooding scenarios.

Task 21.3 Analysis and reporting

A comprehensive Hydrologic Study Report will be prepared to synthesize and communicate the results of the data collection and modeling tasks so that the information is accessible to a

broad range of natural resource management professionals. The technical team will work with the TAC, agency representatives and stakeholders to identify key recommendations for future management of the slough system, as indicated by the recommendations of past planning efforts in light of the results of this hydrologic study. The results will be incorporated into both the Santa Cruz and Pajaro IRWM Plans.

22.0 COMPILE UPDATED PLAN

Lead Agency: Santa Cruz County, Environmental Health Services

Grant Request: \$0

Local Match: \$11,898

Schedule: 11/2011 – 3/2012

All of the findings and recommendations of the technical studies and the other work previously described will be compiled into a draft Plan. The draft Plan will be distributed to the Partner Agencies and made available to the public via the website and listserv. The RWMG will hold at least one workshop to receive feedback on the draft Plan, and one community meeting to gather additional input. Comments will be addressed, or incorporated into the Plan. Applicable agency and organization governing boards will consider and adopt the Plan.

Task 22.1 Adopt Updated Plan

The Plan is scheduled for adoption by the Partner Agencies in March 2012. Some of the technical studies will continue beyond the Plan adoption, and the results of those studies will be incorporated into the Plan upon their completion. The RWMG will develop a process for amendments and updates to the Plan as described in the Governance section to facilitate such changes.

23.0 PROJECT MANAGEMENT

Lead: Regional Water Management Foundation

Grant Request: \$49,175

Local Match: \$0

Schedule: 1/2011 – 1/2013

Successful completion of the Plan update tasks requires project management and oversight. The Regional Water Management Foundation (RWMF) will oversee the management and administration of the grant. The lead agency on specific tasks will be responsible for completing those tasks and the managing consultants. This is the structure currently used for the management of the current Proposition 50 IRWM grant.

Task 23.1 Ongoing Management

The RWMF will provide management and administration for the implementation of the tasks funded under the Proposition 84 Planning Grant. The RWMF will provide a central hub and technical expertise for consolidation of items for review, all reporting, invoicing, and inter-agency coordination, as well as an interface between DWR and the sub-grantees. RWMF staff

will provide day-to-day management of the overall effort. Sub-grantee agencies are responsible for oversight and management of their respective tasks. This structure allows for a single point of contact for information and accountability to ensure that reporting and invoicing requirements are met, and that all deliverable are submitted on time.

23.1.1 Reporting

The RWMF will coordinate quarterly and final reports for this grant, prepared and submitted by the project leads.

24.0 STATEWIDE PROGRAM PREFERENCES

The following table summarizes how the 2005 Santa Cruz Plan and the update activities and tasks described in this document will address the DWR Program Preferences and IRWM Statewide Priorities.

Table 1 – Santa Cruz IRWM Plan and Statewide Priorities

Santa Cruz IRWM Plan – Update Needs Assessment Summary	
DWR Program Preferences	
Include regional projects and programs	Several regional projects and programs are included in the existing Santa Cruz Plan including implementation of a stormwater management program, proposed interties and exchanges among water agencies, region-wide monitoring, region-wide watershed restoration programs (IWRP) and recharge projects. Additionally, the RWMG coordinates with other regions in the Central Coast funding area to discuss projects that may have funding area-wide appeal, such as the expansion of education and outreach or the coordination of monitoring programs. Additional regional projects may be identified during the current project solicitation process. Coordination activities will continue through the Plan update and implementation, and will be documented.
Effectively integrate water management programs and plans within a region	<p>The Santa Cruz Partner Agencies and stakeholders began working to integrate management programs well before the state promoted IRWM. One of the Region’s projects, the Integrated Watershed Management Program (IWRP), is a region-wide habitat and watershed restoration program, coordinates projects developed through multiple watershed assessments, Total Maximum Daily Loads (TMDLs), NPDES Stormwater Management Plans, and other planning documents and studies and provides a mechanism for project implementation. The Santa Cruz IRWM includes a compilation of recommendations developed by the previous planning efforts of the individual water agencies. Current water planning efforts are being conducted under the umbrella of IRWM and are well-coordinated. In addition, the Santa Cruz IRWM project solicitation process provides a mechanism for projects developed through other programs and plans to be incorporated into the Plan.</p> <p>Note technical studies contained in this proposal are all multi-objective and integrated. For example, the Watsonville Sloughs Hydrologic Study will inform</p>

Santa Cruz IRWM Prop 84 Planning Grant Application

	<p>flood management, ecosystem restoration and water supply in both the Santa Cruz and Pajaro IRWM regions.</p>
<p>Effectively resolve significant water-related conflicts within or between regions</p>	<p>Because the Region receives all of its water supply from within the region's boundaries, it does not face inter-regional water conflicts. However, there are several independent water supply agencies and districts within the Santa Cruz Region that have been working more collaboratively in recent years. An example of this is the joint effort between Soquel Creek Water District and the City of Santa Cruz on a potential desalination facility.</p> <p>Several projects in the current proposal will also serve to address potential conflicts by improving our understanding of groundwater resources, establishing a science-based program to help with the prioritization of projects, and analyzing surface water hydrology. Several of the technical studies described in this proposal will also develop critically-needed information to support projects that would further coordinate the agencies, specifically for conjunctive use, water transfers and in-lieu recharge projects.</p>
<p>Contribute to attainment of one or more of the objectives of the CALFED Bay-Delta Program</p>	<p>This preference is not applicable to this Region since there is no connection to the Delta. All of the Region's water supply is locally derived.</p>
<p>Address critical water supply or water quality needs of disadvantaged communities within the region</p>	<p>The Santa Cruz Region contains two disadvantaged communities – the City of Watsonville and the community of Davenport. Several needs for both of these DAC are currently being addressed. Davenport's drinking water treatment plant is being upgraded through an IRWM project partially funded by the Region's Prop. 50 IRWM grant. The City of Watsonville will benefit from the proposed hydrologic study for Watsonville Sloughs included in the Prop. 84 Planning grant. Implementing this study will improve flood management for Watsonville as well as explore opportunities for habitat restoration and other benefits for the DAC. Stakeholder outreach, impacts and benefits standards development under Prop. 84 will have a particular focus on DACs.</p>
<p>Effectively integrate water management with land use planning</p>	<p>Agencies within the Region have a long history of integrating water management with land use planning, due in large part to all the water supply is locally derived. In 1978, local voters passed Measure J, one of the nation's most restrictive growth and land use ordinances, which is closely linked with water supply. Beginning in 1980, the County General Plan has included policies and programs for watershed and water resource protection. Many of the recent studies conducted on behalf of the desalination project address the linkages between land use planning, water demand, and water supply to ensure that management strategies are not growth-inducing, but rather responding to identified deficiencies. Under Proposition 84, the relationship between the IRWM and local land use planning documents will be further investigated.</p>

Santa Cruz IRWM Prop 84 Planning Grant Application

<p>For eligible SWRM funding, projects....or b) provide multiple benefits, including, but not limited to, water quality improvements, ecosystem benefits, reduction of in-stream erosion and sedimentation, and groundwater recharge</p>	<p>The existing Plan contains projects in three of four functional areas – water quality, water supply, watershed management. Flood management is an identified area of deficiency, which will be addressed through the Plan update with Proposition 84 funds. Each of the IRWM projects was evaluated through the same process, which prioritized projects providing multiple benefits across functional areas (i.e. water quality, water supply, watershed management, and flood management)</p>
<p>IRWM Statewide Priority</p>	
<p>Drought preparedness</p>	<p>Since the Region’s water supply is locally derived, the water districts are critically aware of the need to plan for drought preparedness. The region’s water districts operate successful conservation programs, and the region’s per-capita water use is among, if not the, lowest in the state and nation. Nevertheless, analysis shows that a drought similar in severity to the drought of 1976 – 77 would result in significant curtailment and impact on the community. The current USGS climate change study assesses scaled-down model outputs for effects on rainfall, runoff and recharge. This study will lead to development of strategies to adapt to proposed impacts through a more robust water storage and delivery system. Additionally, several of the technical studies will assist in developing resource management strategies that will support projects to diversify the Region’s water supply portfolio.</p>
<p>Use and re-use water more efficiently</p>	<p>The Region’s per-capita water use is among the lowest in the state. Each of the Region’s water districts have extensive conservation programs. A current IRWM implementation project expands the recycled water distribution system in Scotts Valley. Additional water use efficiency projects are anticipated to be identified in the Plan update process.</p>
<p>Climate change response actions</p>	<p>The Region is working with USGS identify climate change models to predict impacts to rainfall, runoff and recharge in the region for the next 100 years. This work will be built upon with proposed Proposition 84 funds to develop policies for both adaptation and mitigation strategies.</p>
<p>Expand environmental stewardship</p>	<p>Environmental stewardship has been a focus for the Region for a long time. This is highlighted by the Integrated Watershed Restoration Program (IWRP). IWRP is an integrated watershed restoration program that incorporates recommendations and projects from watershed plans, TMDL documents, and other planning documents. It uses this list to prioritize projects and seek funding to implement them. To date, over eighty (80) restoration projects have been implemented in Santa Cruz County. Environmental stewardship is one of the four functional areas identified for the Plan update.</p>
<p>Practice integrated flood management</p>	<p>Flood management is one of the deficient management strategies in the existing Plan. The region has faced flooding challenges, and will work with stakeholders to develop additional projects to address this preference. Flood management is</p>

Santa Cruz IRWM Prop 84 Planning Grant Application

	one of the four functional areas for the updated plan.
Protect surface and groundwater quality	Water quality is one of the four functional areas for the updated plan, and numerous water quality projects have been implemented in the region through a variety of program (IRWM, IWRP, Clean Beaches and NPDES), among many others. A number of innovated programs have also been implemented to address water quality concerns, including a Livestock and Lands program and a Rural Roads program (addressing nutrients and sediment, primarily, the two main contaminants of concern in the county). Additional programs will be included in the updated Plan and prioritized based on their ability to meet water quality objectives.
Improve tribal water and natural resources	The RWMG will engage Native American tribes and will identify opportunities for involvement in the Plan’s development. Specific outreach will be conducted in the Plan update.
Ensure equitable distribution of benefits	The RWMG will seek to ensure an equitable distribution of benefits. This proposed technical studies show geographic distribution throughout the Region, with one on the south border, one in the mid-region, and two in the Scotts Valley / San Lorenzo River watershed (which could have potential benefits spanning from that area down to the Soquel / mid-region area). The RWMG will develop the Plan with consideration to an equitable distribution in a manner that targets the most urgent needs.

Figures

Figure 1: Proposition 84 Technical Study Project Locations

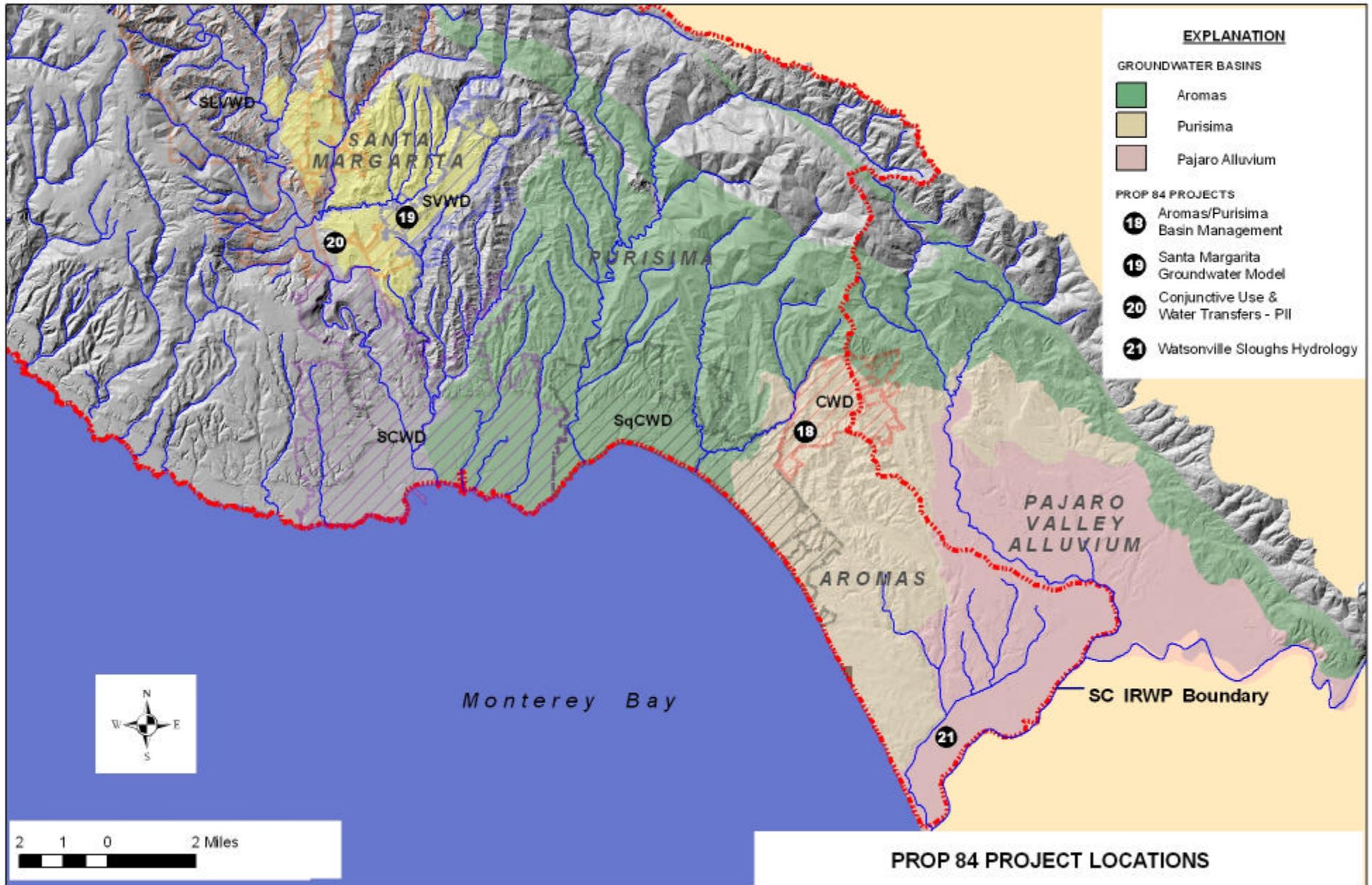


Figure 2: Aromas and Purisima Basin Management Project

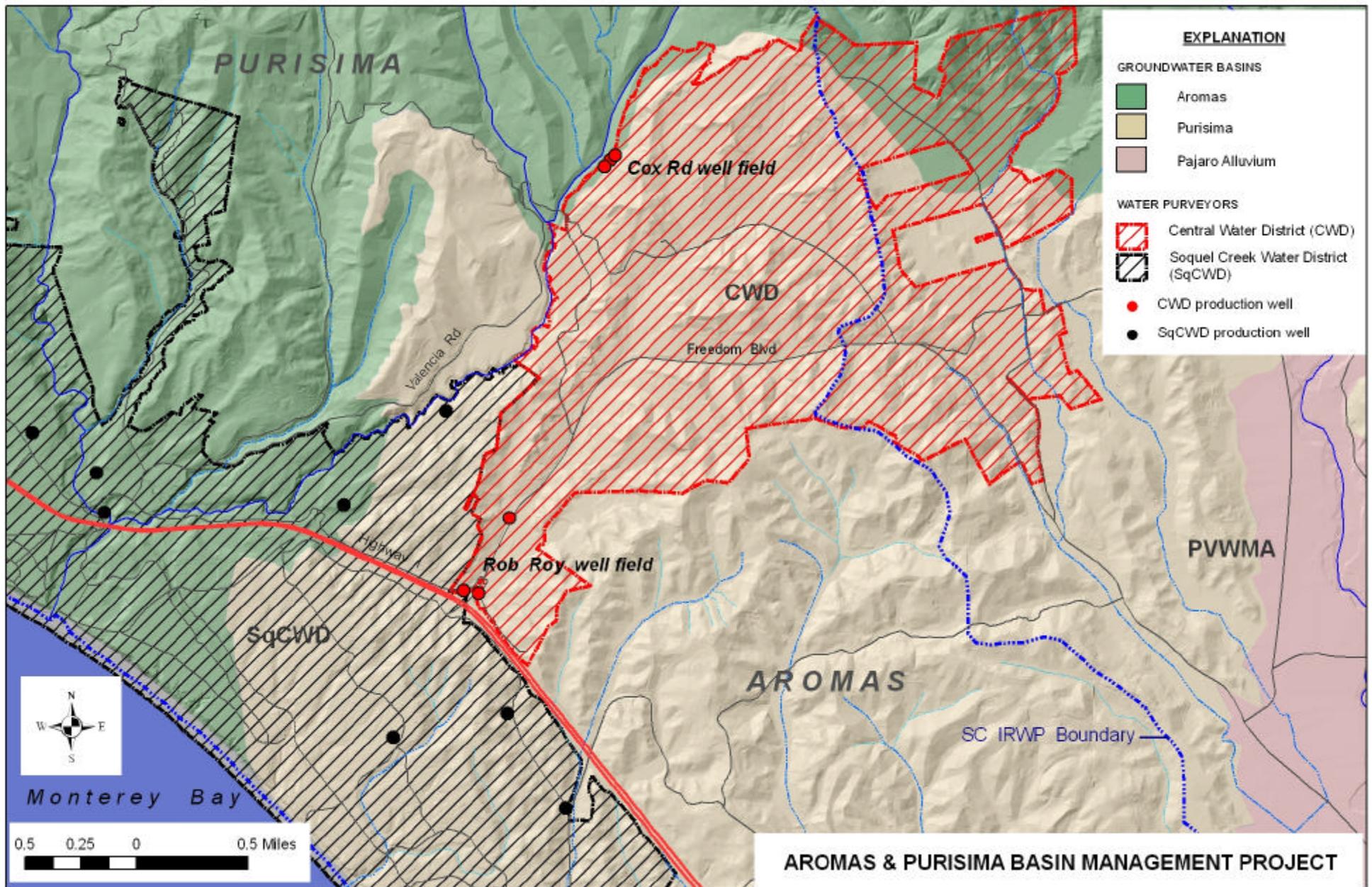


Figure 3: Santa Margarita Groundwater Model Update Project

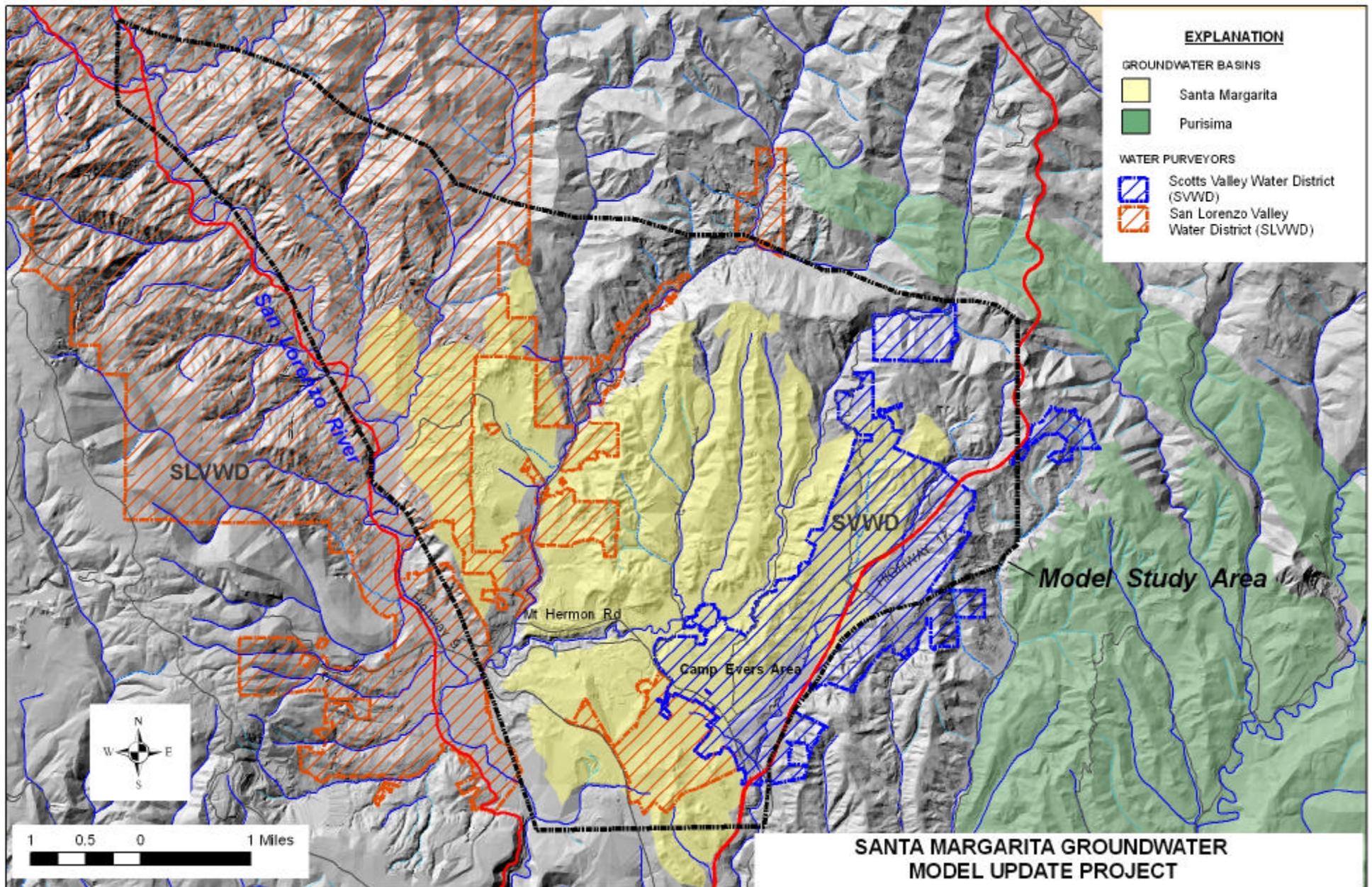


Figure 4: Conjunctive Use and Water Transfers – Phase II

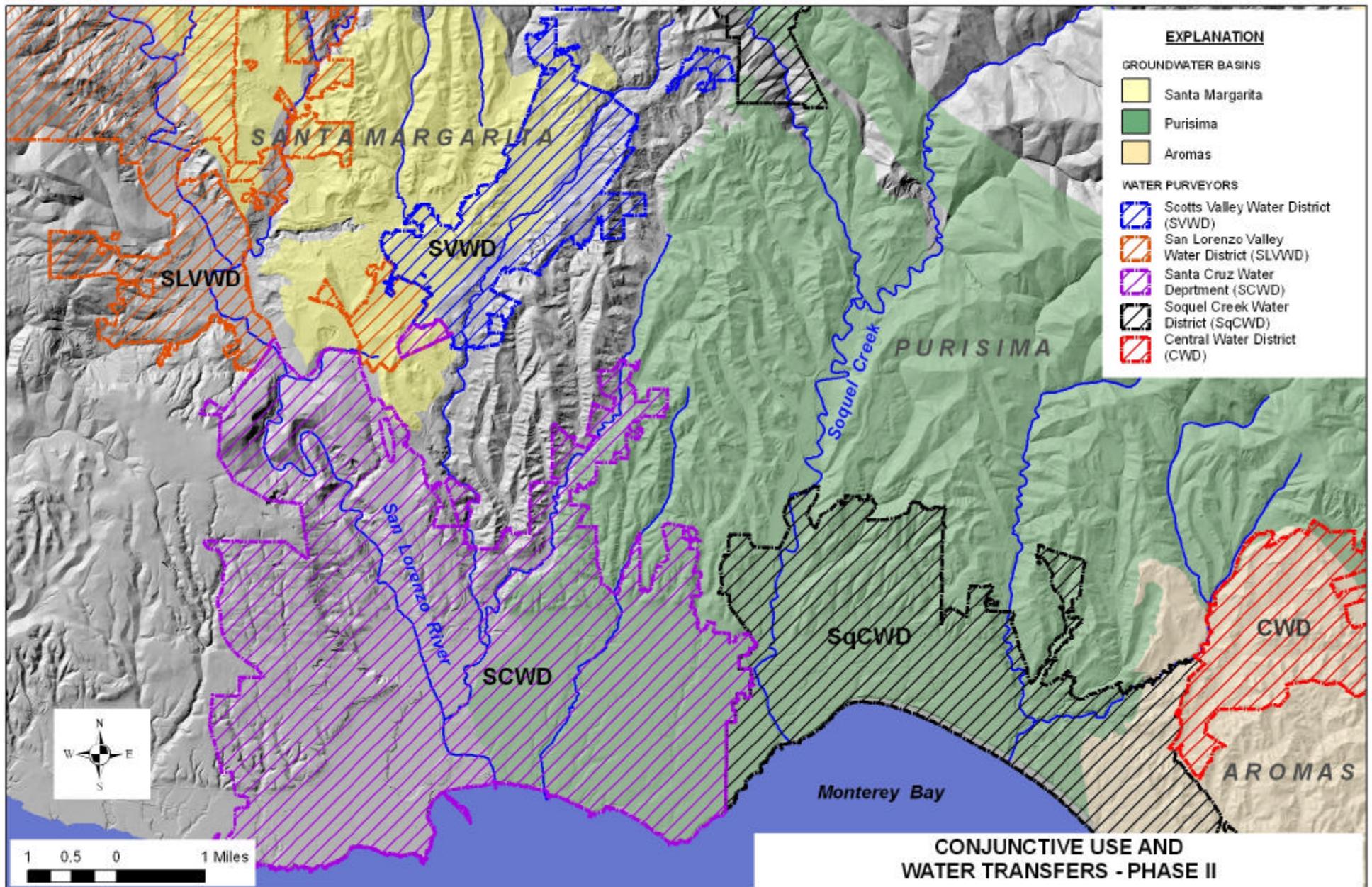


Figure 5: Watsonville Sloughs Hydrology

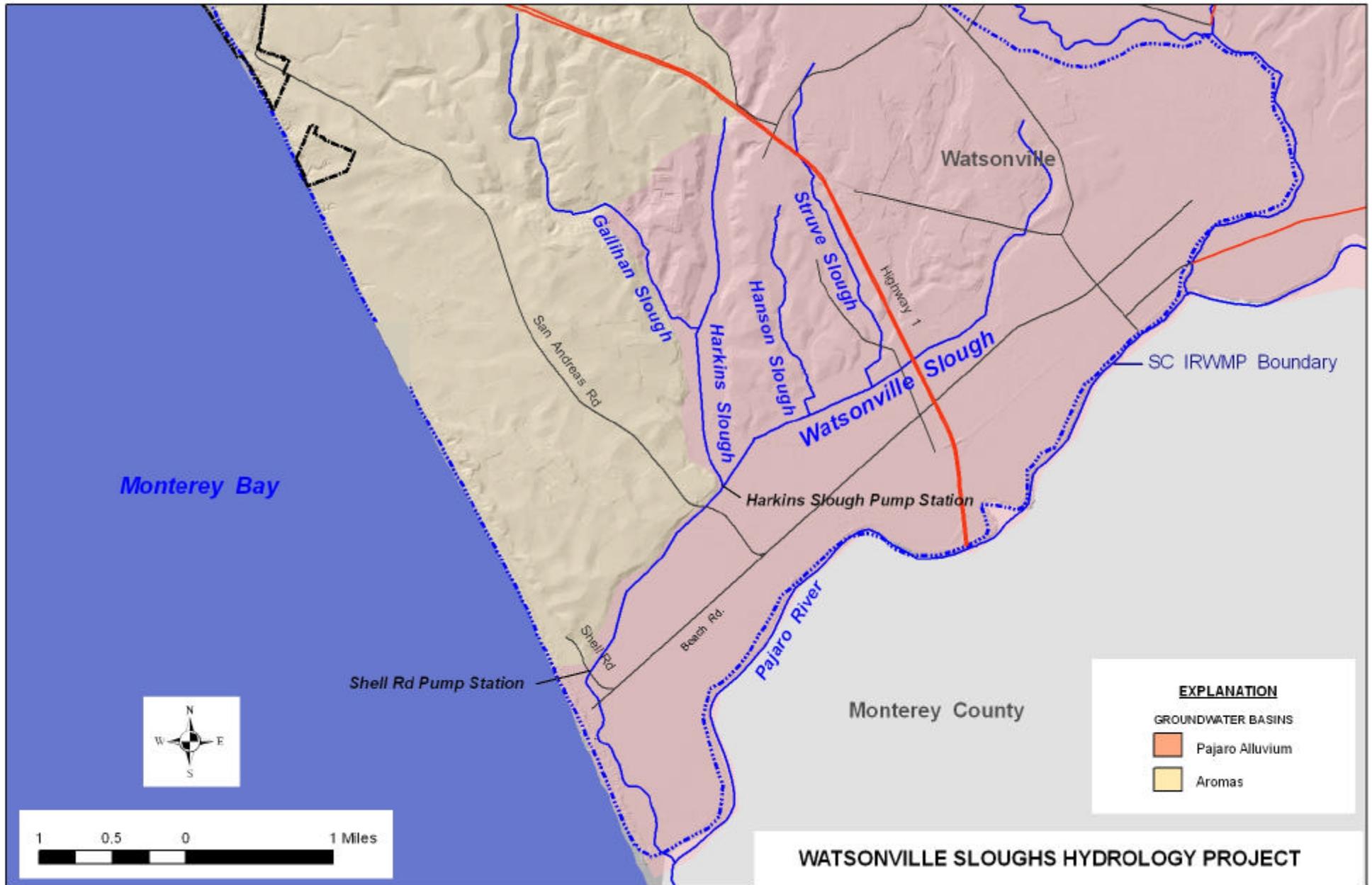


Figure 6: Conceptual diagram surface water – ground water monitoring

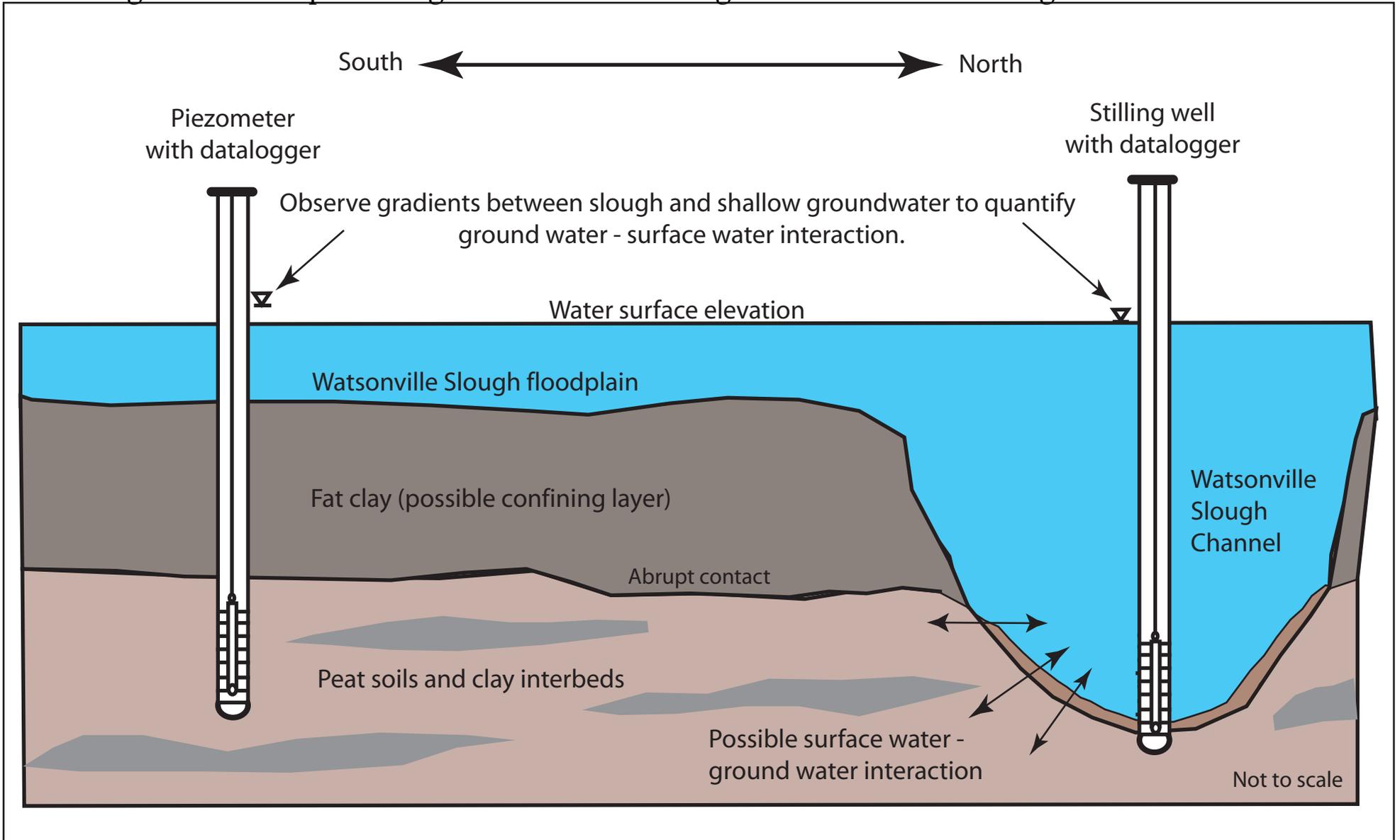


Figure. Conceptual surface water - ground water monitoring

©2008 Balance Hydrologics, Inc.

Letters of Support



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
81440-2010-B-0268

September 24, 2010

Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker
IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, California 95060

Subject: Support for the Santa Cruz Integrated Regional Water Management Planning
Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

We, the U.S. Fish and Wildlife Service (Service), are writing to express our strong support for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan to address key water resources challenges in the Santa Cruz IRWM Region.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region developed a comprehensive IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old, it is need of an update. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies. The area of flood management will be more thoroughly assessed and ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs. Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will be developed based on cutting-edge methodologies being developed in other regions of the state.

TAKE PRIDE[®]
IN AMERICA 

Of particular interest to the Service is the proposed hydrologic study of the Middle Watsonville Sloughs. We have been working with partners for several years to protect and restore habitats within the Watsonville Slough complex. This area is inhabited by the federally threatened California red-legged frog (*Rana draytonii*) and is used by a variety of migratory birds and other wildlife. The proposed hydrologic study would help to inform the design of habitat restoration projects in the Watsonville Slough complex, which could benefit the California red-legged frog and other native wildlife.

Also of interest to the Service is the proposed climate change planning, which would include quantification of expected land subsidence and of the effects of expected sea level rise on wetland habitats. The Service recognizes that climate change will have profound effects on our Nation's fish, wildlife, and plant resources and encourages the collection of data to model and track those effects.

In summary, we believe the IRWM's proposed project would contribute valuable information that would help in management and restoration of important wildlife habitat and aid in planning to respond to climate change. If you have any questions regarding this matter, please contact Jacob Martin of my staff at (831) 464-2950, extension 27.

Sincerely,



Roger P. Root
Assistant Field Supervisor

cc:

Karen Christensen, Resource Conservation District of Santa Cruz County



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

Monterey Bay National Marine Sanctuary
299 Foam Street
Monterey, California 93940

Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

September 21, 2010

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

I am writing to express strong support on behalf of the Monterey Bay National Marine Sanctuary for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that addresses key water resource challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Sanctuary is a federally protected marine area, administered by NOAA, offshore of California's central coast that stretches from Marin to Cambria. It encompasses a shoreline length of 276 miles and 5,322 square miles of ocean. Recognizing the importance of water quality to sustaining the Sanctuary's resources, eight key water quality agencies entered into a Memorandum of Agreement establishing a Water Quality Protection Program (WQPP). Today the WQPP is a partnership of many agencies who are implementing strategies contained in seven issue-orientated action plans. The Santa Cruz IRWMP will help to implement many of the strategies identified in those plans.

Specifically, the SCIRWMP planning grant proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability. The area of flood management will be more thoroughly assessed and ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs. Climate change adaptation and mitigation strategies will be developed as well as a method to better prioritize how the plan will be implemented and its success evaluated.

If you have any questions, please contact me at (831) 647-4217 or bridget.hoover@noaa.gov. Thank you for your consideration of our comments.

Sincerely,

Bridget Hoover
Director, Water Quality Protection Program
Monterey Bay National Marine Sanctuary





September 23, 2010
Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

I am writing to express strong support on behalf of Central Coast Wetlands Group for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that address key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies.

The area of flood management will be more thoroughly assessed and ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs. Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will be developed based on cutting-edge methodologies being developed in other regions of the state.

If you have any questions, please contact me at rclark@mlml.calstate.edu. Thank you for your consideration of our comments.

Sincerely,

Ross Clark
Director
Central Coast Wetlands Group



County of Santa Cruz

HEALTH SERVICES AGENCY

701 OCEAN STREET, ROOM 312, SANTA CRUZ, CA 95060-4073
(831) 454-2022 FAX: (831) 454-3128 TDD: (831) 454-4123

www.co.santa-cruz.ca.us/eh/ehhome.htm

ENVIRONMENTAL HEALTH

September 23, 2010

Grant Review Committee
Proposition 84 Planning Grant Program
c/o IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

I am writing to express strong support on behalf of Santa Cruz County Environmental Health Services for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that addresses key water resources challenges in the Santa Cruz Region and achieves water resource standards set by the Department of Water Resources.

In our role as a partner agency and as a member of the Santa Cruz IRWM Steering Committee, we are committed to the continuance of our region's successful stakeholder collaboration on watershed and water resource management issues. The update and further development of the Santa Cruz IRWMP will help ensure future attainment of Plan goals. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies. Water supply enhancement as well as flood and storm water management will be more thoroughly assessed through a hydrologic study of the Middle Watsonville Sloughs with the added benefit of the identification of ecosystem enhancement opportunities. Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will be developed based on cutting-edge methodologies being developed in other regions of the state.

If you have any questions, please contact me at john.ricker@co.santa-cruz.ca.us. Thank you for your consideration of our comments.

Sincerely,

John Ricker
Water Resources Division Director
Santa Cruz County Environmental Health Services

CENTRAL WATER DISTRICT
400 Cox Road – Post Office Box 1869
Aptos, California 95001-1869
(831) 688-2767

September 20, 2010

Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

**RE: Support for the Santa Cruz Integrated Regional Water Management Planning
Region's Proposition 84 Planning Grant Application**

Dear Grant Review Committee:

I am writing to express strong support on behalf of the Board of Directors of the Central Water District for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that address key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region developed a comprehensive IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old it is need of an update. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies. The area of flood management will be more thoroughly assessed and ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs.

Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will be developed based on cutting-edge methodologies being developed in other regions of the state.

If you have any questions, please contact Ralph Bracamonte, District Manager at 831-688-2767 or via the Central Water District email address at cenwtr@yahoo.com. Thank you for your consideration of our comments.

Sincerely,



Carol Hamilton Monkerud
President,
Central Water District Board of Directors



PAJARO VALLEY WATER MANAGEMENT AGENCY

36 BRENNAN STREET • WATSONVILLE, CA 95076

TEL: (831) 722-9292 FAX: (831) 722-3139

email: info@pvwma.dst.ca.us • <http://www.pvwma.dst.ca.us>

September 21, 2010

Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

I write on behalf of the Pajaro Valley Water Management Agency (PVWMA) to express strong support for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that addresses key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region developed a comprehensive IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old it is need of an update. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies. The

area of flood management will be more thoroughly assessed and ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs. Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will be developed based on cutting-edge methodologies being developed in other regions of the state.

The PVWMA is particularly interested in supporting/participating in a hydrologic study of the Middle Watsonville Sloughs, including the lower portion of Harkins Slough. Since 2002, the PVWMA has been operating an aquifer storage and recovery project that diverts water from Harkins Slough, just upstream of its confluence with Watsonville Slough, and conveys the diverted water to a nearby recharge basin where the water infiltrates into the underlying aquifer and is stored for later use. Since 2002, the PVWMA has been monitoring the sloughs and collecting water level and water quality data that are available for use in the proposed hydrologic study. We hope the hydrologic study will help answer important questions as to water supply and quality within the sloughs.

If you have any questions, please contact me at (831) 722-9292. Thank you for your consideration of our comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brian Lockwood".

Brian Lockwood, PG
Staff Hydrologist

September 20, 2010

Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

I am writing to express strong support on behalf of Resource Conservation District of Santa Cruz County for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support to enable creation of a comprehensive plan addressing key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The RCD is on the steering committee for the Integrated Regional Water Management Group and has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region initially developed an IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old it is need of an update. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide essential information on how to update management of key groundwater basins and increase water supply reliability through the development of improved groundwater models and conjunctive use strategies. The area of flood management will be thoroughly assessed; ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs. Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will be developed based on cutting-edge methodologies being developed in other regions of the state.

The RCD strongly supports this application and work plan as a critical piece to the long term success for Integrated Resources Management in our region. If you have any questions, please contact me at (831) 464-2950, ext. #17. Thank you for your consideration.

Sincerely,



Karen Christensen, Executive Director
Resource Conservation District of Santa Cruz County



SAN LORENZO VALLEY WATER DISTRICT

13060 Highway 9 • Boulder Creek, CA 95006-9119

Office (831) 338-2153 • Fax (831) 338-7986

Website: www.slvwd.com

September 20, 2010

Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

I am writing to express strong support on behalf of San Lorenzo Valley Water District for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that address key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region developed a comprehensive IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old it is need of an update. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies.

The area of flood management will be more thoroughly assessed and ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs.

Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will be developed based on cutting-edge methodologies being developed in other regions of the state.

If you have any questions, or need additional information please do not hesitate to contact me at (831) 430-4625 or email jmueller@slvwd.com. Thank you for your consideration of our comments.

Sincerely,



James A. Mueller
District Manager
San Lorenzo Valley Water District



Board of Directors
Dr. Thomas R. LaHue, *President*
Bruce Daniels, *Vice President*
Dr. Don Hoernschemeyer
Dr. Bruce Jaffe
Daniel F. Kriege

Laura D. Brown, *General Manager*

September 22, 2010

Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

On behalf of Soquel Creek Water District, I am writing to express strong support for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that addresses key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region developed a comprehensive IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old, it needs updating. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information in four areas: 1. Develop improved groundwater models and conjunctive use strategies in order to better manage key groundwater basins and increase water supply reliability; 2. More thoroughly assess and identify flood management and ecosystem management opportunities through a hydrologic study of the Middle Watsonville Sloughs; 3. Develop climate change adaptation and mitigation strategies from up-to-date, scaled-down climate change modeling; 4. Develop a method to better prioritize how the plan will be implemented and its success evaluated based on cutting-edge methodologies being developed in other regions of the state.

If you have any questions, please contact me at laurab@soquelcreekwater.org or the phone number listed on this letterhead. Thank you for your consideration of our comments.

Sincerely,
SOQUEL CREEK WATER DISTRICT

A handwritten signature in cursive script that reads 'Laura D. Brown'.

Laura D. Brown
General Manager



Scotts Valley Water District

P.O. BOX 660006 • SCOTTS VALLEY, CA 95067-0006

(831) 438-2363 • FAX (831)438-6235

EMAIL: contact@svwd.org

Office Address:
2 CIVIC CENTER DR.
SCOTTS VALLEY, CA 95066

Board of Directors:

CHRIS PERRI
President

KEN KANNEGAARD
Vice President

WILLIAM KASSIS
Director

JOE MILLER
Director

DAVID T. HODGIN
Director

CHARLES McNIESH
General Manager

September 23, 2010

Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

I am writing to express strong support on behalf of Scotts Valley Water District for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that address key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region developed a comprehensive IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old it is need of an update. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies. The area of flood management will be more thoroughly assessed and ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs. Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will be developed based on cutting-edge methodologies being developed in other regions of the state.

Grant Review Committee
Proposition 84 Planning Grant Program
September 23, 2010
Page 2

If you have any questions, please contact me at (831) 438-2363. Thank you for your consideration of our comments.

Sincerely,

A handwritten signature in blue ink that reads "Charles McNiesh". The signature is written in a cursive style with a large initial "C" and a prominent "M".

Charles McNiesh
General Manager
Scotts Valley Water District



WATSONVILLE WETLANDS WATCH

P.O. Box 1239 • Freedom, CA 95019

www.watsonvillewetlandswatch.org

“Dedicated to protecting, restoring and appreciating the wetlands of the Pajaro Valley”

September 20, 2010

Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

I am writing to express strong support on behalf of Watsonville Wetlands Watch for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that address key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region developed a comprehensive IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old it is need of an update. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Watsonville Wetlands Watch has partnered with the Resource Conservation District of Santa Cruz County over the past decades and this type of funding and the support to our partners will further our mission and the work we are doing in the Watsonville Slough system and Pajaro Valley watershed.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies.

The area of flood management will be more thoroughly assessed and ecosystem management

Partnering with the City of Watsonville and the Pajaro Valley Unified School District to sponsor the
Fitz Wetlands Educational Resource Center
500 Harkins Slough Road, Watsonville, CA 95076 (831) 728-1156

Watsonville Wetlands Watch is a 501(c)(3) non-profit organization

opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs. Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will be developed based on cutting-edge methodologies being developed in other regions of the state.

If you have any questions, please contact me at 831.728.1156 Extension 3. Thank you for your consideration of our comments.

Sincerely,

A handwritten signature in cursive script that reads "Kris Beall".

Kris Beall
Executive Director
Watsonville Wetlands Watch

Partnering with the City of Watsonville and the Pajaro Valley Unified School District to sponsor the
Fitz Wetlands Educational Resource Center
500 Harkins Slough Road, Watsonville, CA 95076 (831) 728-1156

Watsonville Wetlands Watch is a 501(c)(3) non-profit organization

CITY OF WATSONVILLE

"Opportunity through diversity; unity through cooperation"



Administration

275 Main Street
Suite 400, Fourth Floor
Fax (831) 768-3010

Mayor & City Council

(831) 768-3008

City Manager

(831) 768-3010

City Attorney

(831) 768-3030

City Clerk

(831) 768-3040

Personnel

(831) 768-3020

City Hall Offices

250 Main Street

Community Development

(831) 768-3050
Fax (831) 728-6173

Finance

(831) 768-3455
Fax (831) 728-6031

Redevelopment & Housing

(831) 768-3080
Fax (831) 763-4114

Public Works & Utilities

(831) 768-3100
Fax (831) 763-4065

Purchasing

(831) 728-6029
Fax (831) 763-4066

Airport

100 Aviation Way
(831) 728-6075
Fax (831) 763-4058

Fire

115 Second Street
(831) 728-6060
Fax (831) 763-4054

Library

310 Union Street
(831) 728-6040
Fax (831) 763-4015

Parks & Recreation

30 Maple Avenue
(831) 728-6081
Fax (831) 763-4078

September 23, 2010

Grant Review Committee

Proposition 84 Planning Grant Program

c/o Mr. John Ricker, IRWM Region Steering Committee

701 Ocean Street, Room 312

Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Grant Review Committee:

I am writing to express strong support on behalf of the City of Watsonville for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that address key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region developed a comprehensive IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old it is need of an update. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies.

The area of flood management will be more thoroughly assessed and ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs. Climate change adaptation and mitigation strategies will be developed from up-to-date, scaled-down climate change modeling. Finally, a method to better prioritize how the plan will be implemented and its success evaluated will

be developed based on cutting-edge methodologies being developed in other regions of the state.
If you have any questions, please contact me at 831-768-3149.

Sincerely,

A handwritten signature in black ink that reads "Bob Geyer". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Bob Geyer
City of Watsonville
Asst. Director of Public Works and Utilities

CALIFORNIA COASTAL COMMISSION

CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877

**September 23, 2010**

Grant Review Committee
Proposition 84 Planning Grant Program
c/o Mr. John Ricker, IRWM Region Steering Committee
701 Ocean Street, Room 312
Santa Cruz, CA 95060

RE: Support for the Santa Cruz Integrated Regional Water Management Planning Region's Proposition 84 Planning Grant Application

Dear Mr. Ricker, Grant Review Committee:

I am writing to express strong support on behalf of Coastal Commission for the Santa Cruz Integrated Regional Water Management (IRWM) Planning Region's Proposition 84 Planning Grant proposal. If funded, this proposal would provide critical support for the development of a comprehensive plan that address key water resources challenges in the Santa Cruz Region while achieving the standards set by the Department of Water Resources.

The Santa Cruz IRWM region has a long history of successful stakeholder collaboration on watershed and water resource management issues. In 2005, the region developed a comprehensive IRWM plan in advance of Proposition 50. Development of the plan was rewarded with a \$12.5 million dollar grant for the implementation of 15 key projects. Now that the Santa Cruz IRWMP is several years old it is need of an update. This proposal seeks funding for three key areas of need: technical studies to better support water management efforts; development of additional strategies to address plan deficiencies; and development of a process for prioritization and plan development.

Specifically, this proposal will provide critical information about how to better manage key groundwater basins and increase water supply reliability through the development of improved groundwater models and development of conjunctive use strategies. Supporting the completion of a Hydrologic Study for the Watsonville Sloughs watershed was identified as the top priority project during the Commission's 2006-09 Critical Coastal Area review of Watsonville Sloughs (see enclosure):

The Commission would like to pursue the following priorities for the Watsonville Sloughs CCA in the coming year;

- *Support local partners in the Watsonville Sloughs region by assisting with the final production of the Request for Funding documents, and supporting the identification of funding sources for the Hydrological Assessment study, and allowing the subsequent outcome information to inform all future projects in the watershed.*

The area of flood management will be more thoroughly assessed and ecosystem management opportunities will be identified through a hydrologic study of the Middle Watsonville Sloughs, a Critical Coastal Area watershed under the Coastal Nonpoint Source Program.

If you have any questions, please contact me at 831-427-4852. Thank you for your consideration of our comments.

Sincerely,

A handwritten signature in green ink that reads "Tamara Doan".

Tamara Doan
Water Quality Analyst/Critical Costal Areas Coordinator
Coastal Nonpoint Source Program
California Coastal Commission

Enclosures: *Watsonville Sloughs CCA Fact Sheet, 6-2009.*