RESOLUTION NO. 2011- 94

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ROHNERT PARK AUTHORIZING AND APPROVING A COOPERATIVE AGREEMENT BETWEEN AND AMONG SONOMA COUNTY WATER AGENCY, COUNTY OF SONOMA, CITIES OF COTATI, SANTA ROSA, SEBASTOPOL, ROHNERT PARK, TOWN OF WINDSOR, AND CALIFORNIA AMERICAN WATER COMPANY TO PROVIDE FUNDING AND SUPPORT FOR SANTA ROSA PLAIN GROUNDWATER MANAGEMENT PLAN DEVELOPMENT

WHEREAS, the Santa Rosa Plain Groundwater Basin ("Basin") covers an area of approximately 80,000 acres and provides numerous benefits to Sonoma County;

WHEREAS; the Sonoma County Water Agency, County of Sonoma, Cities of Cotati, Santa Rosa, Sebastopol, Rohnert Park, Town of Windsor, and California American Water Company ("Participants") utilize groundwater from the Basin; and

WHEREAS, Participants wish to develop a groundwater management plan for the Basin.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Rohnert Park that it does hereby authorizing and approving a Cooperative Agreement between and among Sonoma County Water Agency, County of Sonoma, Cities of Cotati, Santa Rosa, Sebastopol, Rohnert Park, Town of Windsor, and California American Water Company to provide funding and support for Santa Rosa Plain Groundwater Management Plan Development.

BE IT FURTHER RESOLVED that the City Manager is hereby authorized and directed to take all actions to effectuate this agreement for and on behalf of the City of Rohnert Park, including execution, if necessary, in substantially similar form to the agreement attached hereto as Exhibit "A," subject to minor modifications by the City Manager or City Attorney.

DULY AND REGULARLY ADOPTED this 11th day of October, 2011.

CITY OF ROHNERT PARK

Mayor

ATTEST:

City Clerk

ROHNERT PARK 19 62 CALIFORNIA

AHANOTU: AYE	CALLINAN: AYE	MACKENZIE: AYE	STAFFORD: AYE	BELFORTE: AYE
AYES: (5)	NOES: (0)	ABSENT: (0)	ABSTAIN: (0)	

Exhibit A

to

Resolution No. 2011-94

"Working Today for Water Tomorrow"
The Sonoma County Water Agency's Integrated Management Policy for ISO 9001 and 14001 states that we are committing to always improving, achieving customer satisfaction, total regulatory compliance, environmental stewardship, and resource management.

Cooperative Agreement to Provide Funding and Support for Santa Rosa Plain Groundwater Management Plan Development

This agreement ("Agreement") is between and among **Sonoma County Water Agency,** a body corporate and politic of the State of California (hereinafter "Water Agency"), and **County of Sonoma, City of Cotati, City of Santa Rosa, City of Sebastopol, City of Rohnert Park, Town of Windsor,** and **California-American Water Company,** a California Corporation, (collectively referred to as "Participants").

RECITALS

A. The Santa Rosa Plain Groundwater Basin (Basin) covers an area of approximately 80,000 acres and is home to approximately half of the population of Sonoma County. The groundwater system beneath the Santa Rosa Plain provides numerous benefits to the region, including rural residential and municipal water supplies, irrigation water for agriculture, and baseflow to streams and surface water bodies.

B. The Sonoma County Water Agency, City of Cotati, City of Santa Rosa, City of Sebastopol, City of Rohnert Park, Town of Windsor, and California-American Water Company utilize groundwater from the Basin for all or part of their municipal water supply.

C. The County of Sonoma has an interest in the groundwater supply in the unincorporated areas of the Basin.

D. Groundwater is likely to continue to be relied upon in the Santa Rosa Plain for meeting domestic, municipal, and agricultural water supply demands in the future.

E. As part of a technical study program intended to enhance the current knowledge regarding groundwater resources within Sonoma County, the United States Geological Survey (USGS) and the Water Agency initiated a five-year study of groundwater resources within the Basin in 2005. The cooperative study, which is jointly funded and supported by the Water Agency, USGS, County of Sonoma, City of Santa Rosa, City of Rohnert Park, City of Sebastopol, City of Cotati, Town of Windsor, and California-American Water Company, is scheduled for publication in Fall 2011.

F. An integrated strategy being undertaken statewide by many local agencies is to develop and implement non-regulatory, voluntary groundwater management plans in compliance with 1992's Assembly Bill 3030 (AB3030) and 2002's Senate Bill 1938 (SB1938). Such plans include public involvement, groundwater level and quality monitoring, and management strategies. Such a plan has been successfully developed and implemented in Sonoma Valley and development of such a plan for the Santa Rosa Plain is one of the immediate actions identified in the Water Agency's Water Supply Strategy No. Five (*Work with Stakeholders to Promote Sound, Information-Based Water Supply Planning Programs*) of the *Water Supply Strategies Action Plan.*

G. There can be multiple potential benefits to developing and implementing a groundwater management plan including increased water supply reliability, minimized adverse impacts to

groundwater, enhanced local management of groundwater resources, and economic opportunities through available state grant funding programs. Developing a groundwater management plan will also further the Basin's ability to meet recent State requirements for groundwater monitoring (Seventh Extraordinary Session Senate Bill 6 [2009] [SBx7-6]) and salt and nutrient management planning.

H. To assess whether stakeholders within the Santa Rosa Plain are interested in pursuing groundwater management planning, the Water Agency retained the Center for Collaborative Policy (CCP) to conduct a stakeholder assessment of groundwater users and those interested in groundwater in 2009. Based on the findings of the assessment, CCP concluded that collaborative groundwater planning for the Basin would require significant pre-planning steps to lay the foundation for a phased groundwater management planning process. These steps included convening a small, representative steering committee to guide pre-planning work and initiating a robust education effort and outreach campaign on the USGS technical study and the groundwater management planning process. The CCP's stakeholder assessment report is attached as Exhibit A.

I. Consistent with CCP's recommendations, the Water Agency convened a Steering Committee in April 2010 to guide preliminary planning and education for groundwater management planning and develop recommendations on whether groundwater planning should proceed based on these activities. The Steering Committee is comprised of representatives from a diverse range of stakeholder constituency groups, including business, environmental, and community organizations; government; municipal water supply; agriculture; and rural residential well owners. The Steering Committee met six times in 2010, held three educational public workshops involving approximately 200 members of the public, and conducted briefings with over 20 organizations.

J. Based on understanding and input gained through these outreach activities, in January 2011 the Steering Committee recommended that stakeholders collaboratively develop a non-regulatory, voluntary groundwater management plan for the Basin under AB 3030.

K. In May 2011, the Water Agency's Board directed staff to prepare a work plan for development of a groundwater management planning process. The Water Agency retained Parker Groundwater, Inc., to prepare the Work Plan, attached as Exhibit B.

L. The Work Plan recommends convening a Basin Advisory Panel to include stakeholders that participate, contribute, and lead the groundwater management planning process.

M. The Water Agency and Participants agree it is in the public interest to work collaboratively with other entities or individuals whose service areas, boundaries, or properties overlie the Basin.

N. The cost to develop a groundwater management plan is estimated to be approximately $400,000 over a period of two years to fund technical consultants and facilitation to assist in the management planning process. In-kind services will also be required from Participants, as described in paragraph 7.4 of this Agreement.

O. The Water Agency has secured $250,000 in funding from DWR for developing a groundwater management plan for the Santa Rosa Plain, comprising: (1) a $220,000 Proposition 84 Planning Grant through the North Coast Integrated Water Management Program and (2) $30,000 in funding for facilitation services. The Water Agency is applying $110,000 of the Proposition 84 Planning Grant it received to fund the technical consultant and facilitation costs which, when combined with the $30,000 in funding received from DWR for facilitation services, lowers the total cost associated with this Agreement to $260,000.

P. The purpose of this Agreement is to: (1) provide a funding mechanism for Participants to contribute a not-to-exceed total cost of $260,000 to pay for Years 1 and 2 of the Santa Rosa Plain groundwater management planning process and (2) establish a working relationship among technical staff and establish tools and protocols for the groundwater management planning process.

In consideration of the foregoing recitals and the mutual covenants contained herein, the parties hereto agree as follows:

AGREEMENT

1. RECITALS

1.1 The above recitals are true and correct.

2. LIST OF EXHIBITS

2.1 The following exhibits are attached hereto and incorporated herein:

a. Exhibit A: Stakeholder Situation Assessment

b. Exhibit B: Work Plan for Groundwater Management Plan Development

c. Exhibit C: Cost Allocation

2.2 In the event of any conflict between the terms in Exhibit A, B, or C, and the Agreement, the terms of this Agreement shall control and prevail. The parties agree that any term contained in Exhibits A, B, or C that adds to, varies or conflicts with the terms of this Agreement is null and void.

3. COMMUNICATION/DESIGNATED REPRESENTATIVES

3.1 Except as otherwise provided in this Agreement, any notice, submittal or communication required or permitted to be served on a party, shall be in writing and may be served by personal delivery to the person or the office of the person identified below. Service may also be made by mail, by placing first-class postage, and addressed as indicated below, and depositing in the United States mail to:

Water Agency	City of Santa Rosa
Project Manager: Marcus Trotta, P.G., C.Hg. 404 Aviation Boulevard Santa Rosa, California 95403-9019 Phone: 707-547-1978 Fax: 707-524-3782 Email: Marcus.Trotta@scwa.ca.gov Designated Representative: Jay Jasperse	Project Manager: Glen Wright, Deputy Director - Engineering Services, City of Santa Rosa, Utilities Department 69 Stony Circle Santa Rosa, California 95401 Phone: 707-543-3948 Fax: 707-543-3936 Email: gwright@srcity.org Designated Representative: Miles Ferris, Director, Utilities Department, City of Santa Rosa
City of Rohnert Park	**City of Sebastopol**
Project Manager: Darrin Jenkins, P.E. 130 Avram Avenue Rohnert Park, California 94928 Phone: 707-588-2243 Fax: 707-794-9242 Email: dajenkins@rpcity.org Designated Representative: City Manager Gabriel Gonzalez	Project Manager: Susan Kelly Engineering Department 714 Johnson Street Sebastopol, California 95472 Phone: 707-823-2151 Fax: 707-823-4721 Email: skelly@cityofsebastopol.org Designated Representative: Jack Griffin

City of Cotati	Town of Windsor
Project Manager: Damien O'Bid 201 West Sierra Avenue Cotati, California 94931-4217 Phone: 707-792-4600 Fax: 707-795-7067 Email: dobid@ci.cotati.ca.us Designated Representative: Damien O'Bid	Project Manager: Craig Scott PO Box 100 Windsor, California 95492 Phone: 707-838-5978 Fax: 707-838-5830 Email: cscott@townofwindsor.com Designated Representative: J. Matthew Mullan
County of Sonoma	**California-American Water Company**
Project Manager: DeWayne Starnes 2550 Ventura Avenue Santa Rosa, California 95403 Phone: 707-565-1900 Fax: 707-565-1103 Email: vstarnes@sonoma-county.org Designated Representative: Pete Parkinson	Project Manager: Andy Soule 4701 Beloit Drive Sacramento, California 95838 Phone: 916-568-4212 Fax: 916-568-4286 Email: asoule@amwater.com Designated Representative: Edward Simon, Vice President, Operations

4. COST SHARING

4.1 The estimated cost to complete the two-year planning process is $400,000 to fund technical and facilitation consultants to assist in the management planning process, with in-kind staff support from the Water Agency and Participants.

4.2 Applying $140,000 of the grant funding obtained by the Water Agency from DWR reduces the estimated two-year planning cost to $260,000 (or $130,000 per year).

4.3 Participants and Water Agency shall share in the $130,000 local share for each of the two years up to the "not to exceed" amounts as listed in Exhibit C and shall, for subsequent years, consider amending this Agreement to provide the additional funding for subsequent years.

5. WORK PLAN

5.1 The Work Plan is attached as Exhibit B.

6. WATER AGENCY RESPONSIBILITIES

6.1 Supervise technical consultant and facilitation consultant in the preparation of a Groundwater Management Plan that complies with AB 3030 and SB 1938. Act as liaison with DWR and provide project management, and project coordination. This responsibility includes coordinating any necessary technical review meetings and providing status updates to Participants as needed.

6.2 Distribute draft copies of all reports generated as part of the groundwater management planning process to each Participant, and distribute final copies of all reports to each Participant.

6.3 Copies of final reports will be made available to the public during the term of the groundwater management planning process.

6.4 If requested, assist Participants' staffs in making presentations to Participants' governing boards regarding the groundwater management planning process.

6.5 Maintain complete and accurate records of all transactions in compliance with generally accepted accounting principles for enterprise accounting as promulgated by the American Institute of Certified Public Accountants and the Governmental Accounting Standards Board. Maintain complete project files with all correspondence, including letters and meeting notes. Such records shall be available to each Participant at all reasonable times for inspection and analysis.

6.6 Water Agency shall submit to Participants written quarterly progress reports, no later than 30 calendar days after the end of each fiscal year quarter that include work accomplished during the period, percent of each task completed, and planned effort for the next period. Fiscal year quarters end on December 31, 2011; March 31, 2012; June 30, 2012; September 30, 2012; December 31, 2012; March 31, 2013; June 30, 2013; September 30, 2013; December 31, 2013; March 31, 2014; and June 30, 2014.

7. PARTICIPANT RESPONSIBILITIES

7.1 Within 30 calendar days of notification by Water Agency that it has executed contracts with the technical and facilitation consultants, each Participant shall deposit with Water Agency its share of Fiscal Year 11/12 costs, as described in Exhibit C of this Agreement.

7.2 By August 1, 2012, each Participant shall deposit with Water Agency its share of Fiscal Year 12/13 costs as described in Exhibit C of this Agreement.

7.3 Participants shall have no obligation to provide funding for the plan after Year 2, except pursuant to a future written amendment of this Agreement.

7.4 Each Participant's Project Manager shall provide technical review and comment on draft work products and reports, and each Participant shall provide a representative to attend Basin Advisory Panel meetings and technical meetings, as needed. Participants shall maintain the confidentiality of any draft report to the extent Water Agency notifies them that such confidentiality is requested.

8. TERM OF AGREEMENT

8.1 This Agreement shall become effective upon execution by Water Agency and all Participants and shall expire on July 30, 2014, unless terminated earlier in accordance with the provisions of Article 9. Work will be complete by June 30, 2014, and the final progress report submitted by July 30, 2014.

9. TERMINATION

9.1 Any Participant may terminate its participation in this Agreement by giving ninety (90) calendar days advance written notice to all other parties of its intent to terminate its participation in this Agreement. Termination shall not relieve the Participant of its obligation to pay costs due before the effective date of the termination.

10. ADDITIONAL REQUIREMENTS

10.1 Authority to Amend Agreement. Changes to the Agreement may be authorized only by written amendment to this Agreement, signed by the Designated Representative of each party or such other representative as is authorized by the governing body of each party.

10.2 No Waiver of Breach. The waiver by any party of any breach of any term or promise contained in this Agreement shall not be deemed to be a waiver of such term or promise

or any later breach of the same or any other term or promise contained in this Agreement.

10.3 Construction. To the fullest extent allowed by law, the provisions of this Agreement shall be construed and given effect in a manner that avoids any violation of statute, ordinance, regulation, or law. The parties covenant and agree that in the event that any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions hereof shall remain in full force and effect and shall in no way be affected, impaired, or invalidated thereby.

10.4 Making of Agreement. Participants and Water Agency acknowledge that they have each contributed to the making of this Agreement and that, in the event of a dispute over the interpretation of this Agreement, the language of the Agreement will not be construed against one party in favor of the other. Participants and Water Agency acknowledge that they have each had an adequate opportunity to consult with counsel in the negotiation and preparation of this Agreement.

10.5 No Third-Party Beneficiaries. Nothing contained in this Agreement shall be construed to create and the parties do not intend to create any rights in third parties.

10.6 Applicable Law and Forum. This Agreement shall be construed and interpreted according to the substantive law of California, regardless of the law of conflicts to the contrary in any jurisdiction. Any action to enforce the terms of this Agreement or for the breach thereof shall be brought and tried in Santa Rosa or in the forum nearest to the city of Santa Rosa, in the County of Sonoma.

10.7 Captions. The captions in this Agreement are solely for convenience of reference. They are not a part of this Agreement and shall have no effect on its construction or interpretation.

10.8 Merger. This writing is intended both as the final expression of the Agreement between the parties hereto with respect to the included terms and as a complete and exclusive statement of the terms of the Agreement, pursuant to Code of Civil Procedure Section 1856. No modification of this Agreement shall be effective unless and until such modification is evidenced by a writing signed by both parties.

10.9 Time of Essence. Time is and shall be of the essence of this Agreement and every provision hereof.

10.10 Entire Agreement. This Agreement is the entire Agreement between the parties.

11. COUNTERPART SIGNATURES

11.1 This Agreement may be executed in counterpart and each of these executed counterparts shall have the same force and effect as an original instrument and as if all of the parties to the aggregate counterparts had signed the same instrument.

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IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date last signed by the parties to the Agreement.

Reviewed as to substance by County of Sonoma:

_____

Department Head

Reviewed as to form:

_____

County Counsel

COUNTY OF SONOMA

_____

Chair, Board of Supervisors

Attest:

_____

County Clerk

Reviewed as to funds by Water Agency:

_____

Division Manager - Administrative Services

Reviewed as to substance by Water Agency:

_____

Department Head

SONOMA COUNTY WATER AGENCY

_____

Chair, Board of Directors

Date: _____

Attest: _____

Clerk of the Board of Directors

CITY OF SANTA ROSA

By: _____

Title: _____

Attest: _____

Recording Secretary

Approved as to form:

_____

City of Santa Rosa Attorney

CITY OF COTATI

By: _____

City Manager or Designated Representative

CITY OF SEBASTOPOL

By: _____

Mayor

Approved as to form:

_____

City of Sebastopol Attorney

CITY OF ROHNERT PARK

By: _____

Mayor

Authorized by Resolution No. 2011-94

Attest: _____

City of Rohnert Park Clerk

Approved as to form:

_____

City of Rohnert Park Attorney

CALIFORNIA-AMERICAN WATER COMPANY, a California Corporation

By: _____

Tom Bunosky, Vice President Operations

TOWN OF WINDSOR

By: _____

Town Manager

Approved as to form:

_____

Richard Rudnansky, Town Attorney

EXHIBIT A

Stakeholder Situation Assessment

SANTA ROSA PLAIN GROUNDWATER MANAGEMENT SITUATION ASSESSMENT

Key Themes from Interviews Conducted by Center for Collaborative Policy

California State University, Sacramento
Center for Collaborative Policy
November 2009

CONTENTS

OVERVIEW

The Santa Rosa Plain*, home to approximately half of the population of Sonoma County, faces growth in population and demand for water. The Russian River and groundwater resources are the primary sources of that water. The challenge of increasing demand and other uncertainties necessitates thoughtful water management. To address this matter and build on the recent progress of the Sonoma Valley Groundwater Management Plan, the Sonoma County Water Agency (Water Agency) directed its staff to investigate the feasibility of pursuing groundwater management for the Santa Rosa Plain. Staff enlisted the Center for Collaborative Policy, California State University, Sacramento, (Center) to conduct an impartial assessment of issues and concerns related to groundwater management and to learn if and how stakeholders might want to address these issues. The Center interviewed 55 individuals representing 37 organizations with an interest in groundwater.

The overall findings indicate competing interpretations on the value and potential of groundwater management planning as well as a significant lack of technical understanding of both the aquifer underneath the Santa Rosa Plain as well as the extent of interaction between surface and groundwater resources. While nearly all interviewees agree that gaining a better understanding of the condition and status of local groundwater resources is critical, many agricultural and ranching interests are extremely hesitant to participate for a fear that groundwater planning would result in increased regulations and operating costs. Moreover, the sheer size and diversity of both geography and interested parties within the Santa Rosa Plain produce a daunting and complex challenge to undertake productive groundwater planning. Not only are there a large number of jurisdictions and competing interests within the planning area, experiences from past regional planning efforts, recent lawsuits filed by environmental organizations and municipalities, and current efforts on the Russian River and in Dry Creek have resulted in extremely high levels of distrust amongst many of the parties and, in particular, of the Water Agency.

Based on these findings, the Center concludes that collaborative groundwater planning within the Santa Rosa Plain would require significant pre-planning steps to lay the foundation for a phased groundwater management planning process. These steps include convening a small, representative steering committee to guide pre-planning work and initiating a robust education effort and outreach campaign on the findings of the U.S. Geological Survey (USGS) technical study.

* The Santa Rosa Plain is a groundwater basin bounded on the northwest by the middle reach of the Russian River floodplain and by mountains of the Mendocino Range on the remaining western boundary. The southern end of the Santa Rosa Plain is marked by a series of low hills, which form a drainage divide that separates the Santa Rosa Plain from the Petaluma Valley south of Cotati. The Santa Rosa Plain is bounded to the east by the Sonoma Mountains south of Santa Rosa and the Mayacmas Mountains north of Santa Rosa. The Santa Rosa Plain is drained principally by the Santa Rosa and Mark West Creeks that flow westward and collect into the Laguna de Santa Rosa.

APPROACH

A professional, impartial facilitation team from the Center worked with the Water Agency to identify a number of individuals representing key stakeholder interests to participate initially in the assessment process. Starting with this list, Center facilitators conducted interviews representing a range of water-related interests and viewpoints on groundwater management. As the interview process proceeded, the Center identified additional individuals to participate based on recurring recommendations from other participants and to ensure a comprehensive and broad range of interests contributed to the Center's understanding. In total, the Center conducted interviews with 55 individuals representing 37 organizations from February to October 2009. Appendix A lists participating organizations and individuals.

To help guide the interviews, the Center generally asked questions identified in an interview questionnaire (see Appendix B), provided to many participants prior to the actual interview. The questionnaire covered the following topics:

- Identification of the major technical issues requiring further research;
- Stakeholders' goals and general concerns regarding the Santa Rosa Plain;
- Historic and current, interpersonal and organizational relationships among stakeholders;
- Appropriate public participation and outreach techniques for potential use;
- Familiarity with the use of groundwater banking as a water resources management strategy;
- Knowledge of other efforts underway that should be considered; and
- Willingness to participate in collaborative planning for the Santa Rosa Plain.

All interviews were confidential. The mediators do not attribute specific comments to individuals in this report. They will not share interview data with any agencies or interest groups. Rather, the Center has summarized and qualitatively evaluated the information gathered through the assessment to identify stakeholder consensus and discord and to develop recommendations related to groundwater management planning.

INTERVIEW FINDINGS

The interviews provided a wealth of information and insights into the water-related issues facing the communities within the Santa Rosa Plain. The Center has summarized issues of concern into categories: major concerns, information gathering and data analysis, interest group dynamics, insights for success and perspectives on collaborative processes.

Major Concerns

Stakeholders lack understanding about the groundwater basin and differ in opinion about its capacity.
Stakeholders from all interest groups articulate a strong need to understand the groundwater basin and extent and location of recharge. Competing studies exist, and stakeholders have differing viewpoints as to how the basin actually functions. Stakeholders question connectivity within the basin, the rate of recharge and where recharge occurs. Stakeholders would like to better understand the relationship between riparian areas and groundwater aquifers. They are unclear about the extent of natural resources' dependence (vernal pools, native plants, and terrestrial species) on groundwater.

Some stakeholders believe that the region's geological complexity make it difficult, if not impossible, to do a hydrologic assessment. Several interviewees reported drilling wells just several feet apart, with one hitting and the other missing water at similar depths. Stakeholders suggest that the Water Agency's Environmental Impact Report on water delivery implies that the Water Agency knows what is happening on streams flowing into Russian River. However, others lack clarity and have not seen modeling that demonstrates this.

Many stakeholders are worried about the capacity and long-term sustainability of the groundwater supply. Reports are that wells are going dry in some areas, requiring deeper wells by pumpees. Rural residents and agriculture are reportedly being affected by decreasing groundwater levels. Certain areas of the Santa Rosa Plain are reportedly experiencing a scarcity of groundwater or cones of depression. Stakeholders suggest that more pumping in drought years increases angst and tensions.

For these reasons, stakeholders are looking forward to the USGS study to be released in late 2010. They hope that it might answer some of these many questions.

Participants question the cumulative effects from current pumping and sustainable yield from the Santa Rosa Plain basin.
Stakeholders generally are unclear about the height and depth of water tables and the basin's vulnerability to contamination or depletion. Generally, all stakeholders agree that the demands on the aquifer are numerous and significant; one interviewee estimated that there are well over 40,000 wells within Sonoma County. Stakeholders report that Santa Rosa is considering putting new wells online while the Water Agency may pump more now from existing wells that were supposedly only for "emergency" use. Interviewees express concern that the Water Agency has used these wells continuously for the past few years given restrained surface water supplies in dry conditions. The effect of a potential casino possibly installing wells and pumping groundwater concerns many.

Despite sensitivities about monitoring, many interviewees suggest that groundwater quality issues and groundwater quantities pumped by urban areas, rural residences,

and agriculture should be documented. However, almost everyone agrees that most water users are adamantly opposed to well metering. And, people are generally afraid to share data and well information. However, as one interviewee stated, "How will we know when we are going to run out of water? We need to understand how much water is really out there."

Groundwater quality concerns exist in various parts of the Santa Rosa Plain. While numerous areas have water quality issues, such as methane, boron, manganese or arsenic, they are generally isolated. Groundwater quality monitoring does occur throughout the Santa Rosa Plain, largely through small municipal or private water companies, public water suppliers and commercial operations who submit water quality data to the state.

Some stakeholders suggest that the North Coast Regional Water Quality Control Board is not configured to address groundwater as over-drafting is not perceived as a form of pollution. The Board is charged with going after polluters to ensure adequate water quality. No one agency appears to have regulatory oversight for groundwater.

Planning is critical, but agricultural interests are skeptical.
Environmental, water supply and governmental interests agree that groundwater management planning is essential to the sustainability of the resource. "We are all in it together," one stakeholder commented. These interests think that groundwater is integral to water management and natural resources although studies could clarify these relationships. Regardless, the cities, agriculture, private water districts and rural residential well owners are all relying on groundwater. From these points of view, planning must integrate differing perspectives, tie in natural resource issues, create a portfolio of solutions and plan for the future.

Stakeholders report that they would like to conduct groundwater planning to achieve the following objectives:

- Ensure that groundwater resources are sustained and protected;
- Replenish the groundwater basin by locating recharge ponds;
- Help to mitigate groundwater overdraft if and when this occurs;
- Sustain storage reserves for use during dry periods;
- Develop monitoring programs that provide data to assist in evaluating and managing the groundwater basin;
- Identify and evaluate threats to groundwater quality and prevent or mitigate contamination associated with those threats;
- Manage in the face of climate change and increased efforts to expand carbon

sequestration; and

- Increase public awareness of the importance of groundwater and methods for both conserving water use and protecting water quality.

However, many but not all representatives of agricultural interests express skepticism and concern about the need to manage groundwater. They worry about the implications of groundwater planning. One stakeholder suggested, "The situation needs to get much worse before real progress can happen. Need for a crisis before the issue of groundwater will become salient." Many representatives of agriculture are worried about increased regulation and bureaucracy potentially associated with groundwater planning. Several agriculture representatives suggested that if groundwater management planning were to occur, organizers would need to articulate potential benefits and outcomes to help agricultural stakeholders understand why and how groundwater management might provide benefits. Fear of an adjudicated basin might make a non-regulatory groundwater management plan attractive.

Stakeholders would like to integrate water management and supply issues and land use into overall planning.
Nearly all interviewees desire a better understanding of current water use by various user types, including urban, agriculture, dairies and rural well owners. Stakeholders would like to understand the relative comparison between the volumes being pumped by various users, including the amount of water being transported out of the Santa Rosa Plain and Sonoma County. Stakeholders repeatedly advocate that the region could realize significant water use reduction with more proactive conservation.

Many interviewees stressed that surface water issues are inextricably linked to groundwater and, thus, groundwater management planning cannot happen without discussing surface water issues. Stakeholders question the nature of the interconnections between the groundwater and surface water systems.

Interviewees also suggested that land use should be examined and the impact of land use planning on groundwater better understood. Vernal pools, wetlands, and impervious surfaces are subject of stakeholder discussion. Several suggested storm water recharge and attempting to enhance recharge areas as potential management strategies.

Generally, interviewees were cautious, yet open to exploring groundwater banking, capturing excess surface water flows in the wintertime and storing potable water in underground aquifers for later use during summertime. Stakeholders were curious about the potential that this might provide, and some viewed it as a favorable way to accommodate anticipated climate changes with fewer, more extreme storms. Many stakeholders would be deeply concerned by the possibility of using recycled water for groundwater banking and using winter surface runoff water that might have potential contaminants. Interviewees raised concerns about the amount of

energy that would be required for pumping necessary for groundwater banking. Another interviewee suggested that recharge should be maximized first since it just seemed less costly and complicated. One concern was that efforts would be made to extract more water than was banked, which could further stress the aquifer.

The complexity of the region will make collaborative planning very challenging.
Stakeholders suggest that the number of jurisdictions (multiple cities and the County) involved increases the difficulty of planning. A few suggest that the Santa Rosa Plain is too big and issues are too complicated. Interest group dynamics (see below) will also make groundwater planning in this region challenging.

Information Gathering and Data Analysis

The mediators asked participants about technical information needed to facilitate groundwater planning. No consensus exists on the state of the groundwater basin, the connectivity of the aquifers, groundwater use and its impact on the aquifer. Generally interviewees are awaiting the USGS study, funded by regional water suppliers, to help clarify some of the questions and misunderstanding. Some water contractors express frustration that they haven't been more involved in the development of the USGS study. One interviewee observed, "The biggest challenge is collecting the relevant data." With this said, participants are interested in a range of questions, highlighted below.

- What are existing groundwater levels?
- What are sustainable groundwater pumping levels?
- How much water is actually being pumped and by whom?
- How does variation in soils and aquifers affect the groundwater system?
- What is the potential for aquifer storage and where is recharge possible? How many recharge ponds would be needed to actually make a difference and where should recharge ponds be located? How much impervious surface exists? What effect is impervious surface having on recharge?
- What role are pesticides and emerging chemicals playing in groundwater quality?
- How is wastewater being handled? What is the potential for increased use of recycled water?
- What impact are abandoned wells having on groundwater quality?
- What are the sources and potential remedies for methane, manganese, arsenic,

and boron in groundwater?

- What is the surface-to-aquifer relationship and what are the physical challenges and opportunities for additional storage?
- What effect is wastewater runoff having on Laguna de Santa Rosa?
- How will pending Total Maximum Daily Load (TMDL) effort be undertaken by North Coast Regional Quality Control Board and what are the potential outcomes from this effort? Many are concerned that process would lead to mandatory well monitoring.

Interest Group Dynamics

One of the challenges to groundwater management planning would be interest group dynamics. Stakeholders highlight theses issues on several levels.

First, many question the Water Agency's interest in groundwater planning. While most stakeholders agree that the Water Agency is the obvious choice to organize groundwater management planning, they question the Water Agency's ability or willingness to engage and negotiate in a transparent manner. They urge the Water Agency to be forthcoming regarding its interests in groundwater management planning and why it is important to them and to enlist the assistance of neutral consultants to guide the process.

Second, a major challenge is the unincorporated area. Sonoma County has an estimated 40,000 groundwater wells and the highest number of residential wells in a county in the state (along with Fresno County). These homeowners represent a major interest in groundwater—they rely on groundwater to live on their property, and their property has no value without it. Yet, this interest group is not well organized. Identifying representatives and conducting outreach with this user group would be a challenge.

Some parties believe that environmental advocates wield too much influence and, as a result, agriculture and dairy are seen as "culprits". Others express concern about negotiating directly with some interest groups who have relied on litigation to affect water management planning. History has resulted in significant distrust between various groups and incorporated areas in central and southern portions of Santa Rosa Plain.

Stakeholders express concern that blaming one party or another is neither fair nor accurate. Agricultural interests feel that they are often accused of using too much water when in fact they are striving to conserve. Cities are also accused of drawing down the aquifer while city representatives highlight conservation success and responsible management. A few stakeholders suggested that politics influence everything. These dynamics will significantly affect any planning effort.

Insights for Success

Raise interest and highlight success stories.

Interviewees suggest that stakeholders would benefit from learning about analogous success stories and understand how groundwater management planning might benefit them. Stakeholders recommend that success stories from other areas, including Sonoma Valley, be made available before initiating any collaborative effort for Santa Rosa Plain. Interviewees suggest that stakeholders have a need for education throughout Sonoma County to raise awareness about water issues so participants can understand what interests of theirs would be met through groundwater management planning. A number of individuals suggested that water bills and other easy-to-read documents be used to help spread the word.

Share information.

Interviewees suggest that the process would need to be open and allow all issues and concerns to be discussed. First publishing the USGS study is advisable. Data and urban area's pumping volumes would also need to be understood and discussed. Participants are not clear as to the urgency of planning. Stakeholders would like to incorporate scientifically based rationale for discussing the "problem" if in fact there is a problem with current groundwater use. A few interviewees stated that there is a strong need for easy-to-comprehend visual tools to understand water levels and usage.

Non-regulatory approach and local control are critical if rural parties are going to participate.

One of the major concerns associated with groundwater management planning is the perception that planning will lead to additional regulation. Participants are extremely hesitant to support any effort that might increase limitations on business operations or costs of doing business. Stakeholders recommend that the focus for management strategies consider where the least economic impact will occur and continue to allow for business expansion. These stakeholders suggest that cost effective, efficient measures that protect private property rights are critical. A number of interviewees suggested breaking the outreach and planning effort into smaller geographic areas to allow for more focused participation.

Perspectives on Collaborative Processes

Participants offered a range of perspectives on participating in a collaborative process that might be of concern or affect their ability to participate. To the extent possible, they suggest that any collaborative that might move forward address these issues:

- Have strong participation from interested groups and, ideally, commitment to not go to litigation and/or adjudication.
- All parties, including Graton Rancheria and non-English speaking communities should be represented.
- Some parties may have more time than others to participate in effort; however, others need to be involved.
- Need to have participants that are not angry and full of strong emotions. People need to be good listeners and hear the opposing points of views.
- Participants need to understand and accept technical findings and consider needs of historical uses within area.
- The collaborative discussion could serve as a process to develop good science on issue.
- Unsure how to get the diverse groups to come to consensus; this seems close to impossible.
- Process must not be dominated by agency people and, in particular, the Sonoma County Water Agency, but technical staff should be provided to assist effort.
- Need more outreach and general public meetings. Disinformation has not helped. Weekly update on water would be a great addition to the newspapers.
- Neutral facilitation needs to be clear and direct how the process will be run. The process must be very structured to overcome past problems and the political nature of this area and topic.
- A champion for a groundwater management planning effort is essential to its success.

Conditions for Collaboration

The Center's team analyzed the assessment findings in light of conditions essential for a successful collaborative planning process and outcome. While many of these conditions are met in this case, a few present serious challenges. For the reasons presented below, the Center concludes that the project does not presently meet all of these conditions. However, there are opportunities for improving relationships and building trust amongst the relevant parties that will enable the initiation of a phased education and planning effort for the Santa Rosa Plain. This approach is described in the "Recommendations" section of this report.

There are multiple opportunities to create mutually shared value and potential areas of agreement.
While many opportunities do exist for creating beneficial outcomes from a collaborative groundwater planning effort, the current level of mistrust between key parties is acute. As a result, much work has to be done to build better working relationships prior to and through initiating a comprehensive planning process.

The primary parties are identifiable; however, not all are willing to participate.
While the key parties have been identified and participated in this assessment, a few are very reluctant to participate at this time. In particular, key agricultural, dairy, and ranching interests are highly skeptical about groundwater planning and the Water Agency's motives for wanting to undertake any water-related planning at this time.

Each party does not have a legitimate spokesperson.
Representatives from the key urban areas, environmental organizations, and agriculture exist. However, rural private well owners who live within the unincorporated areas of Sonoma County do not have a consolidated "voice" that represents their interests. How this large and dispersed group is brought to the table is a key question that must be answered.

There is a relative balance of power among the parties.
This condition is challenging as many perceive the environmentalists as wielding too much influence. Moreover, some parties question the Water Agency's motivation and worry that the Water Agency is not being forthcoming as to their long-term plans for use of additional surface and ground water.

External pressure to reach agreement exists.
Some agricultural and ranching interests do not see the need to undertake groundwater management planning at this time. A number of individuals stated that the water situation will have to get much worse before they want to do anything proactive. Conversely, other interviewees believe that the area is "extremely lucky to have not destroyed the aquifer yet so time is on our side." These voices believe that all parties "need to do what we can to protect and preserve groundwater resources." While shared belief that there is a need to proactively plan at this time does not exist, parties are open to learning more about the subject.

Primary participants share an investment in long-term, cooperative working relationships.
Some stakeholders highlight a high level of resentment and animosity between the agencies and some environmental interests in the region that will make collaboration very difficult. On a positive note, the pending TMDL for the Laguna de Santa Rosa presents an opportunity for both agriculturalists and environmentalists to work together and help build better relationships. Additionally, there appears to be strong working relationships between a number of the parties that could be leveraged to permit discussions between parties that have had a troubled past.

There are adequate financial resources to carry out the collaborative process.
The Water Agency will seek adequate funds to allow the process to go forward if all parties are willing and committed to working together. Potential funding may be available from various grants that the California Department of Water Resources makes available to local groundwater efforts.

RECOMMENDATIONS

Based on the analysis of the assessment findings, the Center concludes that collaborative groundwater planning within the Santa Rosa Plain would require significant pre-planning steps to identify stakeholder representatives and improve technical understanding of the aquifer. Further, a small planning group or steering committee would work to identify representative spokespeople and re-assess agricultural representatives' interest in planning. These efforts could improve conditions to be favorable to initiate groundwater management planning. The Center recommends that the following phased education and planning activities be initiated with the goal of moving towards a more comprehensive groundwater management planning effort.

Step 1: Convene a Santa Rosa Plain Steering Committee

Timeframe: Early 2010

A Steering Committee should be convened to oversee and undertake the public education and outreach campaign and to work towards building improved relationships amongst participants to set the stage for groundwater planning. The Steering Committee would have the following key tasks:

- Assist in developing scenarios for the USGS study
- Guide education activities on the USGS study and groundwater management planning frameworks
- Conduct outreach to identify stakeholder representatives and address concerns related to groundwater planning
- Recommend a groundwater planning framework if appropriate

The Steering Committee would be convened as soon as appropriate to participate in developing scenarios for the technical study, possibly organizing a workshop for a range of input on these scenarios.

The Committee would guide subsequent efforts, specifically the outreach component of the USGS study release. This education and outreach serves as the first step toward a more formal and integrated approach to the management of groundwater within the Santa Rosa Plain. This would also be an opportunity to meet with many rural residential well owners.

Members would conduct focused outreach with agriculture to better understand and address agricultural representatives' concerns about groundwater planning. The goal would be to address these concerns so that planning could eventually move forward in a manner acceptable to all stakeholder interest groups. The Steering Committee could also provide guidance on who might need to participate in a broader stakeholder planning group should one move forward.

The Steering Committee would also explore groundwater management planning to assess what frameworks might be appropriate for the Santa Rosa Plain. They would consider different policy and legal issues that might affect planning. Lastly, they would contemplate who should participate in a Basin Advisory Panel should groundwater management planning progress.

The Water Agency could provide staff and technical support while neutral facilitation of the committee would be helpful. Drawing from the groundwater planning experience in Sonoma Valley, a committee work plan, charter, and operating rules should be developed and reviewed at the group's initial meeting. The committee should be consensus-driven and representative of the key interests within the Santa Rosa Plain. However, considering the initial focus of this group's effort, the Center recommends that the membership be kept small to help build strong working relationships and to focus work efforts. Additional organizations would be added to form a stakeholder planning group at a future time when, and if, a groundwater management plan is initiated.

The Center recommends the following considerations for composing the Steering Committee:

- Balance and symmetry between public agencies and non-governmental organizations
- Agriculture, cities, environment, groundwater users and water supply interests represented
- Geographical representation across the Santa Rosa Plain
- Small and focused participation (8-10 members)

Step 2: Initiate a robust public education and outreach campaign on USGS technical study and groundwater planning

Timeframe: 2010

The USGS technical study on Santa Rosa Plain groundwater will contribute significantly towards building a common understanding of the groundwater basin. USGS will publish the report in late 2010. Earlier in 2010, the Center recommends that USGS begin presenting the preliminary findings to broad range of existing organizations, local governments and interested parties within the Santa Rosa Plain. Once the final report is available, USGS and the Water Agency should distribute it widely. As part of the distribution, the Water Agency and USGS should work together to create easy-to-understand information that summarizes the study's findings and groundwater basics into a "user-friendly" groundwater primer. The study and groundwater primer or summary should be made available on appropriate websites and other outlets. The summary should be translated into Spanish. This information, coupled with existing water conservation literature, would help educate citizens as to the importance of water conservation and protecting and improving overall watershed and aquifer conditions.

Lastly, this outreach effort could highlight success stories related to non-regulatory voluntary groundwater management. This would help stakeholders to understand the potential benefits of groundwater planning and provide an opportunity to address fears and concerns associated with planning.

To guide this effort, the Center recommends that an education and outreach plan be developed. This plan would identify a broad range of stakeholder groups in the region, rely on existing social networks, and be tailored to the needs of the various areas within the planning area. Technical staff could make presentations and local experts, such as representatives from the California Ground Water Association and others, could assist to broaden understanding of the aquifer. The plan would also detail specific media relations and advertising, internet-based outreach, direct mail / e-mail, speakers' bureau, and collateral materials to be used in the outreach effort. Another goal of this outreach effort is to identify potential representatives of residential well owners who might serve in a collaborative. Lastly, the outreach efforts would have an emphasis on working with agricultural interests to understand the technical information and the potential for groundwater management.

Step 3: Re-assess interest in groundwater planning and identify key representatives

Timeframe: Fall 2010

This step represents a milestone. The Steering Committee, including the Sonoma County Water Agency and in consultation with others, would have to determine that both agricultural and rural residential interests are willing to participate and have willing and appropriate representation before collaborative groundwater management planning could occur.

As discussed in the findings, agricultural representatives are hesitant to participate or support groundwater management planning. Since so many interested parties: the cities, county, water suppliers, developers and environmentalists are interested in addressing groundwater concerns through joint planning, a concerted effort should be made to negotiate the conditions necessary to assure robust agricultural participation in any planning effort. As part of the overall outreach effort, staff and the steering committee would work with agricultural leaders to identify and address concerns with groundwater management planning.

The Steering Committee would also confirm that rural residential well owners have representative spokespeople to participate in a planning effort.

Step 4: Contingent on Step 3, develop a phased-approach to groundwater planning

Timeframe: Winter 2010-2011

Initiating a phased-approach to groundwater planning is contingent on successfully completing the previous step. If the Steering Committee is able to address the concerns of agriculture to ensure its participation and identify rural residential well owners, then the Center recommends that groundwater planning officially commence.

Phase 1: Organize Basin Advisory Panel to negotiate groundwater management planning

Building on outreach conducted during the previous steps, the Steering Committee would discuss and develop membership of the collaborative planning body, known as the Basin Advisory Panel. The Steering Committee would continue to function to develop proposals and review technical documents for the full Panel's review and approval. (The Basin Advisory Panel might also recommend a technical subcommittee to review materials.) The Panel would be the primary decision-making body, reviewing and recommending elements of a groundwater management plan.

Basin Advisory Panel participants would include these organizations and interest groups, **and potentially others**. Geographical representation from throughout the Santa Rosa Plan would also be critical.

Potential Basin Advisory Panel Membership (or Representation)

Governmental

- State of California Department of Public Health
- Sonoma County Agricultural Preservation & Open Space District
- County of Sonoma Permit and Resource Management Department
- City of Cotati
- City of Rohnert Park
- City of Santa Rosa
- City of Sebastopol
- Town of Windsor

Tribal

- Federated Indians of Graton Rancheria

Environmental

- Laguna de Santa Rosa Foundation
- O.W.L. Foundation
- Occidental Arts and Ecology Center
- Sonoma County Water Coalition
- Sebastopol Water Information Group (SWIG)

Water Supply & Groundwater Technical Issues
- Cal American Water Co.
- California Ground Water Association
- Sonoma County Water Agency
- Small Water Districts (Penngrove Water District, others from throughout the area)

Rural Residential Well Owners

Agricultural
- Sonoma County Farm Bureau
- Sonoma County Winegrape Commissions
- United Winegrowers
- Dairy Farmer
- Rancher(s)
- Farmer / Grower(s)

Business / Developers
- Codding Enterprises
- Commercial Businesses
- North Bay Realtors Association

Other
- Sotoyome and/or Gold Ridge Resource Conservation District

Phase 2: Stakeholder Issues & Interests and Technical Issues
As this process moves forward, the Basin Advisory Panel would educate itself on successful groundwater efforts, in-depth knowledge of the USGS study, and the interests (why groundwater is important) to all the stakeholders.

The Basin Advisory Panel would hear presentations from representatives from jurisdictions where groundwater management planning has been effectively undertaken. By doing so, Panel members would become educated as to how groundwater management planning could be undertaken in a proactive manner that effectively manages the groundwater basin.

The Panel would increase the depth of its understanding regarding the technical information available on the Santa Rosa Plain, identifying gaps in technical information and modeling improvements to be incorporated into the plan and long-range planning and data collection efforts.

The stakeholders would strive to learn about the interests of all stakeholders participating on the Panel and would take field trips to see first hand areas of particular interest. This would lay the foundation for negotiating elements of the plan.

Phase 3: Develop the Groundwater Management Plan
The next stage of the planning effort would be to develop plan elements: identify basin management objectives; develop management strategies to achieve objectives; and agree on governance structure and implementation plan. The goal of this phase would be a consensus-based adopted groundwater management plan.

Phase 4: Advance & Implement Groundwater Management Plan
Once the organizations that developed the plan have adopted it, the last stage would be to implement the plan. This involves seeking funding and moving forward the management strategies outlined in the plan. This is an ongoing effort that is overseen by the entity identified in the plan itself.

CONCLUSION

Groundwater is critical to the water supply needs of Sonoma County. Therefore, it is of the utmost importance that the communities within the Santa Rosa Plain continue to work together to manage their groundwater resources sustainably. Increased demands and the possibility of reduced water in the future make effective and efficient management of the groundwater basin essential. Through collaborative efforts, a plan could be developed that will identify how the management of the groundwater basin could be improved, thereby ensuring that groundwater resources will continue to be sustained and protected. However, efforts must be made before initiating a planning process to ensure that a plan could be developed with all the major stakeholders represented.

APPENDIX

A. Interviewees

State, County and Local Governments

Office of California State Senator Patricia Wiggins: Fred Euphrat
California Department of Public Health: Janice Oakley
North Coast Regional Water Quality Control Board: Luis Rivera, David Evans
County of Sonoma Agricultural Preservation & Open Space District: Andrea Mackenzie
County of Sonoma Permit and Resource Management Department: Pete Parkinson, Connie Stravros
City of Cotati: John Guardino, Damien O'Bid, Janet Orchard
City of Rohnert Park: Darrin Jenkins, Jake Mackenzie
City of Santa Rosa: Susan Gorin, Glen Wright, and Gerry Nakano
City of Sebastopol: Linda Kelley, Sue Kelly
Sotoyome Resource Conservation District: Kara Heckert
Town of Windsor: Richard Burtt, Deborah Fudge, Matt Mullan, Craig Scott

Tribes

Federated Indians of Graton Rancheria: John Maier (Tribal Counsel)

Water Providers and Associations

California Ground Water Association: Gary Mickelson
Penngrove Water Company: Jim Downey
Sonoma County Water Agency: Jay Jasperse

Business & Agricultural Interests

Codding Enterprises: Geof Syphers
Community Alliance of Family Farmers: Terry Harrison
Ocean View Dairy: Marvin Nunez
Dempel Farming Company, Bob Dempel
Quaker Hill Development Corporation: Craig Harrington
Saralee's Vineyards: Saralee Kunde
Sonoma County Farm Bureau: Lex McCorvey, Dominico Carinalli, Ed Grossi, Bob Muelrath, Mike Strunk, Walt Ryan
Sonoma County Winegrape Commission: Nick Frey
United Winegrowers: Bob Anderson
Weeks Drilling: Charlie Judson

Environmental & Conservation Interests

Rue Furch
Fred Soares
Blucher Creek Watershed Council and Community Alliance of Family Farmers
Board Member: Steve Howard
California Native Plant Society: John Herrick
Coast Action Group: Allan Levine
Laguna de Santa Rosa Foundation: Christina Sloop
O.W.L. Foundation: H.R. Downs
Occidental Arts and Ecology Center: Brock Dolman
Sebastopol Water Information Group (SWIG): Jane Nielson
Sonoma County Conservation Action: Dennis Rosatti, Bill Kortum, Guy Connor
Sonoma County Water Coalition: Stephen Fuller-Rowell
Sonoma Land Trust: Wendy Elliott (brief consultation/interview)

B. Santa Rosa Plain Assessment Interview Questions

Introduction

1. Please tell me about yourself and your organization(s) and how you are involved in water issues in the Santa Rosa Plain area?

Issues to be Addressed

2. What concerns and interests do you have regarding water supply in the Santa Rosa Plain? And groundwater in particular? What concerns, if any, do you have about the future?
3. What issues might others raise? Are any of these issues in conflict with yours? How might these differences be resolved?
4. What types of coordination currently occur between users? What other opportunities for coordination would you foresee?
5. What potential benefits and potential drawbacks do you associate with developing some type of groundwater management plan?
6. What issues would a successful groundwater management plan address? Avoid?
7. What obstacles to developing a management plan might arise? Do you have suggestions to overcome them?
8. What are your thoughts about the Sonoma County Water Agency's role/capabilities in developing a groundwater management plan for the Santa Rosa Plain?
9. Are you familiar with the use of groundwater banking as a water resources management strategy (i.e., capturing excess surface water flows in the wintertime and storing the water in underground aquifers for later use during summertime)? If so, what are your opinions on its applicability for the Santa Rosa Plain?

Stakeholder Involvement

10. If this effort goes forward, which individuals or groups do you think should be involved? How?
11. Who doesn't usually participate in these types of public efforts that you believe should be involved?
12. Would you or your organization/agency like to participate in developing a groundwater management plan if it were to go forward? How would you envision being involved?
13. What kinds of public outreach would you recommend?

Context and Information Needs

14. What information would you like to have or what technical questions would you like answered as part of this effort?
15. Do you feel that you have a good understanding of where Santa Rosa Plain's water supply comes from and how water is used in the area?
16. What other related efforts are underway that I should know about?

Conclusion

17. Do you have any interests or concerns you have not yet mentioned?
18. Is there anything else you think I should know or any advice you might offer?
19. Who else, if anyone, do you think I should speak with?

C. Center for Collaborative Policy

The Center for Collaborative Policy is a unit of California State University, Sacramento. The mission of the Center is to build the capacity of public agencies, stakeholder groups, and the public to use collaborative strategies to improve policy outcomes. The Center has 40 mediators and facilitators working throughout the State of California on some of its most vexing policy dilemmas. www.csus.edu/ccp

Gina Bartlett is a senior mediator and director of the Center's Bay Area Office. She facilitates a number of groups, including the collaborative implementing the consensus-based Sonoma Valley Groundwater Management Program. Ms. Bartlett received her Master's degree in Conflict Analysis and Resolution from George Mason University and has worked in the field since 1991.

Austin McInerny has worked as a mediator on a number of challenging natural resource management projects over the past dozen years. Mr. McInerny has conducted assessments for the South Bay Salt Pond Restoration Project (the largest wetland restoration effort to be undertaken on the West Coast), the Upper Klamath Basin Working Group Restoration Planning Process, and Desert Tortoise Recovery Planning Situation Assessment. Mr. McInerny received a Masters in Regional Planning from Cornell University in 1997 and has published and lectured on collaborative planning methods.

EXHIBIT B

Work Plan for Groundwater Management Plan Development

Work Plan for a Groundwater Management Plan for the Santa Rosa Plain, California

Draft
Prepared for the Sonoma County Water Agency
May 10, 2011

Prepared by Parker Groundwater

Table of Contents

1.0 INTRODUCTION

This work plan presents an approach to develop a voluntary, non-regulatory groundwater management plan for the Santa Rosa Plain Groundwater Basin, Sonoma County, California.

As there is not a statewide system for regulating or permitting groundwater use in California, groundwater management has primarily been conducted at the local level. A recent Framework Document entitled *Sustainability from the Ground Up, Groundwater Management in California* developed by the Association of California Water Agencies describes the many benefits of locally developed groundwater management plans in addressing potential issues, such as declining groundwater levels, constraints on surface supplies, regulation of storage, water quality degradation, and the expense of litigation or adjudication (ACWA, 2011). Many of these potential issues have occurred in the Santa Rosa Plain and future growth in population and demand for water coupled with constraints on existing surface water sources are likely to increase stresses on the region's groundwater resources. In response to these issues, the Sonoma County Water Agency (Water Agency) and its partners, including the California-American Water District, City of Cotati, City of Rohnert Park, City of Santa Rosa, City of Sebastopol, County of Sonoma, and the Town of Windsor, are investigating the feasibility of pursuing groundwater management planning for the Santa Rosa Plain Groundwater Basin.

The work plan is organized into three main sections including an introduction, groundwater management overview, summary of the stakeholder assessment and activities conducted in Santa Rosa Plain, and the description of the approach to the development of a groundwater management plan for the Santa Rosa Plain Groundwater Basin. Section 1.0, the introduction, includes the purpose, background information and setting for Santa Rosa Plain. Provided in Section 2.0 is a summary of the stakeholder assessment conducted by the Center for Collaborative policy, and subsequent Santa Rosa Plain Steering Committee formation, activities, and recommendations. Section 3.0, presents the proposed approach to developing a groundwater management plan and includes six tasks and a schedule incorporating three phases to developthe groundwater management plan in the Santa Rosa Plain.

1.1 Purpose

The purpose of this work plan is to provide a strategy and approach for developing a groundwater management plan using a collaborative process in the Santa Rosa Plain region of Sonoma County, California. The groundwater management plan will be developed in compliance with the Groundwater Management Act (Water Code Section 10750 et. seq.) commonly referred to as Assembly Bill 3030, and Senate Bill 1838 which amended Water Code Section 10750 (Statutes of 2002, Chapter 603). The approach proposed in this work plan is non-regulatory, and includes a collaborative, facilitated process through establishing a stakeholder group to provide input to the groundwater management plan as it is developed. As further described in Section 2.5, this strategy and approach were recommended by the Steering Committee formed in 2010 to explore groundwater management planning and gather input from broad stakeholder interests in

the Santa Rosa Plain. Appendix A provides a list of the required and recommended components of a groundwater management plan.

1.2 Background Information

In order to provide a solid technical foundation upon which to build a groundwater management planning process and as part of an ongoing program intended to enhance the current knowledge regarding groundwater resources within Sonoma County, the United States Geological Survey (USGS) initiated a five-year cooperative study of groundwater resources within the Santa Rosa Plain Groundwater Basin in 2005. The cooperative study is being conducted by the USGS in partnership with the Water Agency, County of Sonoma, City of Santa Rosa, City of Rohnert Park, City of Sebastopol, City of Cotati, Town of Windsor, and Cal-American Water Company. The five-year study is in its final stages and is scheduled for publication in 2011. Results from the study will provide stakeholders with tools to assist in evaluating the hydrologic impacts of future climate-change scenarios and alternative groundwater management strategies for the basin, including the development of a fully-coupled numerical surface water/groundwater flow model for the basin. In anticipation of the completion of the USGS study, the Board of Directors of the Water Agency directed staff to move forward with preliminary groundwater management planning in the Santa Rosa Plain. The Water Agency contracted with the Center for Collaborative Policy (CCP) to conduct an assessment of issues and concerns related to water supply and groundwater management in the Santa Rosa Plain and to convene a Steering Committee for preliminary groundwater planning activities.

1.3 Setting

The Santa Rosa Plain area, one of several basins in Sonoma County that uses a combination of groundwater and surface water delivered from the Russian River for supply, is the subject of this work plan. The Santa Rosa Plain area, like the rest of Sonoma County and a good portion of the state, has experienced rapid population growth and accelerated urbanization in response to economic expansion over the past few decades. The Santa Rosa Plain groundwater basin covers an area of approximately 80,000 acres and is home to approximately half of the population of Sonoma County. The groundwater system beneath the Santa Rosa Plain provides numerous benefits to the region, including rural residential and municipal water supplies, irrigation water for agriculture, and baseflow to streams and surface water bodies. The Santa Rosa Plain groundwater basin has some focused areas of adverse impacts to groundwater, which include recent and historical areas of declining groundwater levels, potential water quality degradation, and the potential for impacts to surface water along watercourses from groundwater/surface-water interaction. Additionally, limitations on summer time deliveries from the Russian River may cause a greater reliance on groundwater to supplement reduced surface water supplies. An effective, locally planned and implemented basin-wide groundwater management program would provide a tool for the Santa Rosa Plain groundwater basin to address these adverse impacts and to achieve long-term sustainability of groundwater resources.

1.4 Groundwater Management Overview

In California, groundwater management generally refers to a locally developed and controlled program that integrates groundwater protection, recharge, extraction and monitoring to achieve the long-term sustainability of the resource. Since groundwater basins vary greatly around the state, local control and supervision allow for the most effective and careful management of the resource (ACWA, 2011). The Sonoma Valley Groundwater Management Program represents an example of a local groundwater basin which has developed an effective groundwater management plan. Some potential benefits of groundwater management planning can include:

- Helping to effectively resolve significant water-related conflicts within the Santa Rosa Plain through a non-regulatory process resulting in active local control and management of the Region's groundwater resources.
- Assisting in effectively addressing long-term drought preparedness by contributing to sustainable water supply and reliability through efficient groundwater basin management.
- Providing a linkage between water management and land use planning.
- Promotion of long-term viability of the Groundwater Basin for future generations.
- Prevention of aquifer depletion and stabilization of groundwater levels leading to reduced energy consumption.
- Environmental benefits (e.g., increase or sustain baseflow to streams).
- Improved coordination of surface water and groundwater management to meet existing and future water demands.
- Assisting the Region in complying with statewide requirements, such as DWR's California Statewide Groundwater Elevation Monitoring Program (CASGEM), as required by Senate Bill SBx7-6, and Salt and Nutrient Management Planning.
- Integration with other regional studies and planning efforts, including a groundwater banking feasibility study being conducted by the Water Agency, City of Cotati, City of Rohnert Park, City of Sonoma, Town of Windsor and the Valley of the Moon Water District and a flood control/groundwater recharge study being conducted by the Water Agency.

The proposed groundwater management planning efforts for the Santa Rosa Plain would also include strategies that:

- Involve water use efficiency, water conservation, recycling and reuse to help meet future water demands, increase water supply reliability and adapt to climate change; and

- Advance and expand conjunctive management of multiple water supply sources, which when implemented will address adaptation to climate change.

A groundwater management plan is a document that provides the framework to implement a groundwater management program in a basin or portion of a groundwater basin. A groundwater management plan may be short or long, simple or complex. A groundwater management plan is a planning tool that assists overlying water users in maintaining a safe, sustainable and high quality groundwater resource within a groundwater basin. Groundwater management plans are intended to be "living" documents that are updated and refined over time to reflect changing conditions and to document progress made in achieving groundwater management objectives.

Groundwater management plans have become a required "baseline" document for agencies seeking grant funds for water-related projects available from the State of California. The majority of the populated groundwater basins have some sort of groundwater management in place, with approximately 150 individual and joint agency groundwater management plans in California and more are being developed. The Santa Rosa Plain, Sonoma County, is one of the areas in the state that does not have a groundwater management plan. An adopted and implemented groundwater management plan is a minimum requirement for agencies seeking competitively awarded grant funds for the planning or construction of water-related projects that involve groundwater. More information on groundwater management planning approaches is included in Appendix A.

2.0 SANTA ROSA PLAIN PRELIMINARY GROUNDWATER PLANNING

2.1 Introduction

The Water Agency enlisted the Center for Collaborative Policy, Sacramento State University, (CCP) to conduct an assessment of issues and concerns related to water supply and groundwater management and to learn if and how stakeholders might want to address these issues. The stakeholder assessment approach and process is summarized below, and a copy of the report is provided in Appendix B (CCP, November 2009).

The CCP provides impartial mediation services as part of its mission to build capacity of public agencies, stakeholder groups and the public to use collaborative processes to improve policy outcomes. CCP has provided the majority of facilitation services utilized by the DWR on water resources and groundwater management planning.

2.2 Interviews

CCP met with Water Agency staff to identify an initial list of individuals to interview and then relied on interviewees for additional referrals to ensure a broad range of perspectives was presented. CCP staff conducted interviews with 55 individuals representing 37 organizations on a range of water-related interests and viewpoints on groundwater management. This consisted of conducting interviews with individuals and small groups when appropriate, including two meetings conducted with agricultural representatives

from the region. Questions focused on concerns related to water supply, stakeholder involvement, and information needs.

Sample interview questions included in the CCP's *Santa Rosa Plain Groundwater Management Situation Assessment Report* (Situation Assessment Report) are provided in Appendix B.

2.3 Interview Findings

The overall findings of CCP's assessment indicate competing interpretations on the value and potential of groundwater management planning, as well as a significant lack of technical understanding of the aquifers underneath the Santa Rosa Plain and the extent of interaction between surface and groundwater resources. A detailed description of the interview findings are included in the Situation Assessment Report provided in Appendix B.

2.4 Recommendations of the Center for Collaborative Policy

Based on these findings, CCP concluded that collaborative groundwater planning for the Santa Rosa Plain Groundwater Basin would require significant pre-planning steps to lay the foundation for a phased groundwater management planning process. These steps included convening a small, representative steering committee to guide pre-planning work and initiating a robust education effort and outreach campaign on the USGS technical study and the groundwater management planning process.

The Situation Assessment Report also provided insights for success for preliminary groundwater management planning, which include: 1) raising interest in groundwater issues and highlighting success stories, including the Sonoma Valley Groundwater Management Program; 2) sharing information, in particular providing information from the USGS technical study of the Santa Rosa Plain Groundwater Basin as it becomes available; and 3) emphasizing the non-regulatory approach and local control aspects of groundwater management planning.

2.5 Summary & Results of Steering Committee Activities

Consistent with the CCP's recommendations, the Santa Rosa Plain Steering Committee was convened to address groundwater stakeholder concerns, oversee a public education and outreach effort to build common understanding about groundwater, and develop recommendations on whether groundwater planning should proceed based on these activities. Activities associated with preliminary groundwater planning in the Santa Rosa Plain include the following:

- A small, representative steering committee was formed in April 2010 and met six times through January 2011 to guide pre-planning work and initiate education and outreach on the USGS technical study and the groundwater management planning process. The steering committee is comprised of a broad array of interests, including: agricultural, environmental, local government/municipal water purveyors, water well drillers and rural residential well owners.

- More than 20 briefings at existing organizations were held and three public workshops attended by nearly 200 people were held to build a common understanding of the Santa Rosa Groundwater Basin and benefits and options for groundwater planning, and receive public input.

In January 2011, the Santa Rosa Plain Groundwater Steering Committee recommended that stakeholders collaboratively develop a non-regulatory, voluntary groundwater management plan for the Santa Rosa Plain Groundwater Basin. On May 3, 2011, these recommendations were presented to the Water Agency's Board of Directors, which directed staff to develop this work plan to prepare a groundwater management plan and to negotiate a multi-party agreement with partners in the basin to fund the preparation of a groundwater management plan.

3.0 WORK PLAN APPROACH TO DEVELOPMENT OF A GROUNDWATER MANAGEMENT PLAN FOR SANTA ROSA PLAIN

As envisioned, a basinwide groundwater management planning process would incorporate a wide array of local stakeholders, including municipal, private and small system water purveyors, agriculture, business/development interests, environmental organizations, and rural residential well owners. The process will be led and facilitated by a mediator from the Center for Collaborative Policy.

The primary core of this facilitated process will be a Basin Advisory Panel of representative stakeholders from the Santa Rosa Plain area. Following the completion of a Cooperative Funding Agreement for the process, the Water Agency would convene a broad-based Basin Advisory Panel to develop a consensus-based groundwater plan under the Groundwater Management Act (AB 3030). The BAP would be the primary decision-making body in developing the plan, and would consist of 25-30 members representing key groundwater interests: Agriculture (Dairies, Farmers & Wine Producers); Business / Developers; Environmental; Government (Tribal, State, County and Cities); Public Health; Rural Residential Well Owners; and Water Supply & Groundwater Technical Expertise. The Steering Committee recommended that Basin Advisory Panel members either live in or have jurisdiction in the Laguna de Santa Rosa watershed. Center for Collaborative Policy impartial mediators would work with individual organizations to identify representatives and to assure that the Panel's composition is representative of all groundwater interest groups.

It is envisioned the Panel will meet monthly and perhaps more often on occasion over the approximate two year period of developing the groundwater management plan for Santa Rosa Plain. A Technical Advisory Committee (TAC) and/or task specific Work Groups, smaller specialized working committees or groups, may also be formed to conduct some of the work of the BAP, under the direction of the BAP.

The development of a groundwater management plan is a somewhat complex process, and will be completed in phases as recommended by the Center for Collaborative Policy:

Phase One

- Task 1.0 – Convene Basin Advisory Panel (BAP) and Conduct Organizational Meetings – Months 1 through 3

Phase Two

- Task 2.0 - Enhance Basin-Wide Understanding, Develop Vision, and Public Outreach Plan and Workshops – Months 4 through 6

Phase Three

- Task 3.0 – Develop Groundwater Management Goals and Basin Management Objectives, Resolution and Hearing to Prepare GMP – Months 7 through 10
- Task 4.0 – Develop Basin Monitoring Program and Data Collection Protocol– Months 11 through14
- Task 5.0 – Develop Management Components & Strategies, and Conduct Alternatives Analysis – Months 15 through 18
- Task 6.0 – Develop Implementation Approach, Compile and Prepare Groundwater Management Plan –Months 19 through 24

Phase Four, Groundwater Management Plan Implementation, would be conducted subsequent to groundwater management plan development and adoption.

A flow chart illustrates the relationship between tasks below.

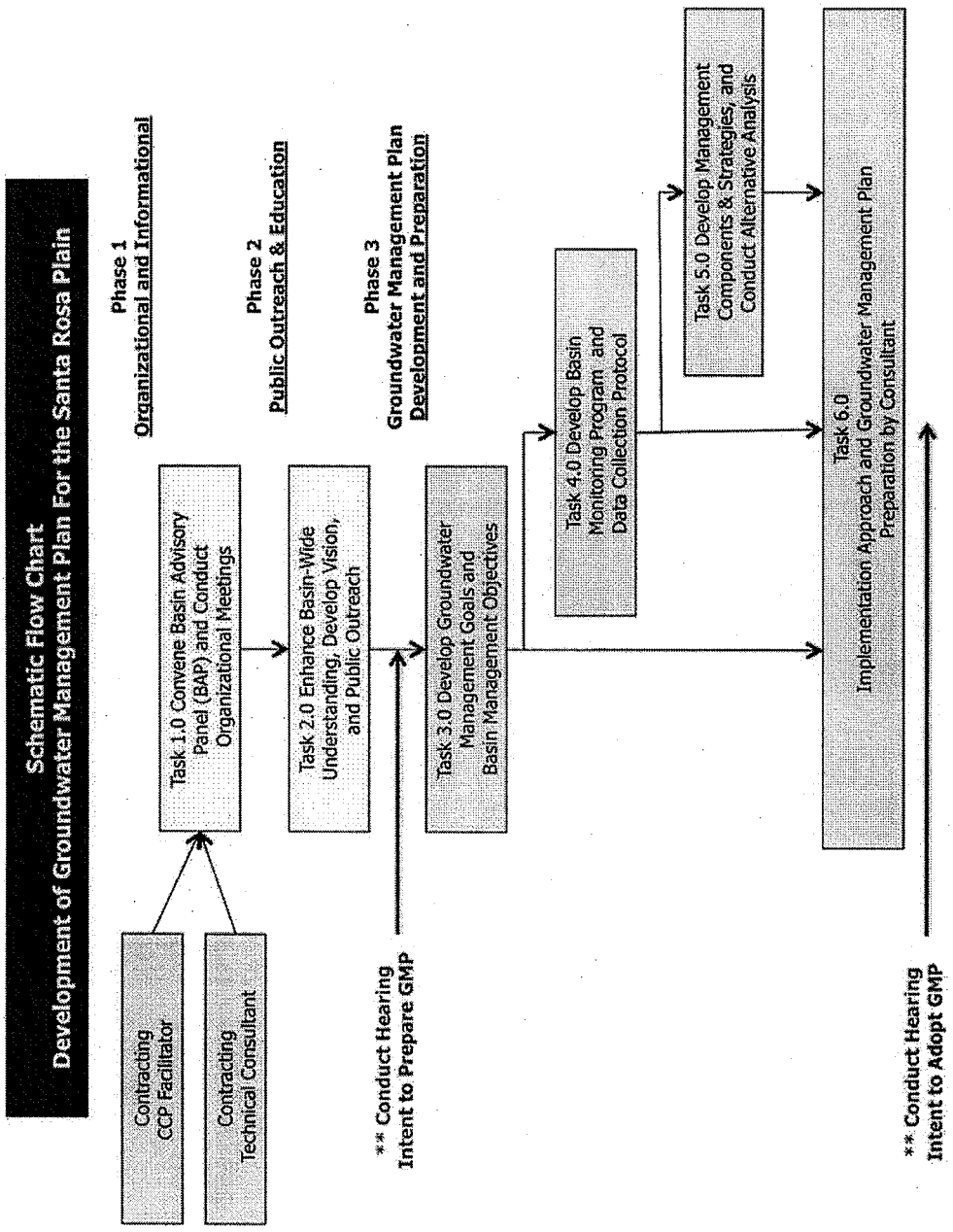

Figure 1 – Schematic Flow Chart – Development of GMP for Santa Rosa Plain

Task 1.0 Convene Basin Advisory Panel (BAP) and Conduct Organizational Meetings

Schedule: Months 1 through 3
Products: Group Charter, Mission, and Ground Rules

The first task of developing a groundwater management plan for Santa Rosa Plain will be to develop a list of representative stakeholders to approach and convene in a Basin Advisory Panel (BAP). Developing the list of representative stakeholders for participating in the BAP will be performed by CCP and will be based on discussions with stakeholders and input and information obtained from the numerous briefings and workshops conducted during the preliminary planning activities. The BAP will meet monthly initially, and monthly to every other month, as needed, throughout the process of developing a groundwater management plan and will provide input to the process on behalf of their various stakeholder groups. During Task 1.0, the BAP will have two to three organizational meetings to discuss and form consensus on various processes including decision-making, membership, relationship to decision making entities, responsibilities for communicating with constituents, media relations, and overall work plan, including objectives and schedule. As mentioned above, the BAP would also develop recommendations on the public outreach plan. Some of these questions the BAP would address during these initial meetings include:

- What subcommittees or technical work groups might best support the Panel's work?
- What is the best method to educate the broader community on water supply issues?
- What additional types of financial resources are available and how might the group obtain them?
- What structure would best support implementation of a groundwater management plan (Lead Agency, Joint Powers Agreement, or Memorandum of Understanding)?
- What is the binding nature of decisions reached in the groundwater management plan?

The BAP might determine that some of these questions would be better answered in a later phase once the group has a better understanding of the basin or once the basin management objectives are defined, for example. If so, the group may choose to defer those questions until the necessary information becomes available.

A series of guiding documents will be developed for the BAP, including a BAP Charter, Mission, and BAP Meeting Ground Rules and Procedures. These documents will be prepared in draft form and made available to the BAP prior to the first initial organizing meeting. Additionally, CCP will plan and prepare meeting agendas, provide communications to stakeholders regarding meetings, and materials for meetings.

Task 2.0 Enhancement of Basin-Wide Understanding and Vision Development, Public Outreach Plan

Schedule: Months 4 through 6

Products: Workshop Handouts, Update Primer on Santa Rosa Plain Groundwater, Water Resources Section of GMP, Public Outreach Plan, and Website Enhancements

Public outreach, information dissemination, and enhancing the understanding of the BAP and local citizens, elected officials, and decision-makers are key to the success of the process. As this process moves forward, the BAP would educate itself on successful groundwater efforts, in-depth knowledge of the USGS study, and the interests (why groundwater is important) to all the stakeholders. The BAP would hear presentations on the USGS technical study and from representatives from jurisdictions where groundwater management planning has been effectively undertaken. The BAP would increase the depth of its understanding regarding the technical information available on the Santa Rosa Plain, identifying gaps in technical information and modeling improvements to be incorporated into the plan and long-range planning and data collection efforts. The stakeholders would strive to learn about the interests of all stakeholders participating on the Panel and would take field trips to see areas of particular interest. This would lay the foundation for negotiating elements of the plan.

CCP recommends a public outreach plan be developed and implemented by the BAP, staff, and consultants to keep interested parties informed, based on the level of interest in groundwater in the Santa Rosa Plain and the importance of the BAP's work. Enhanced understanding and shared information provides the foundation for building understanding, trust and consensus. Task 2 includes the development and implementation of a public outreach plan, enhancing and updating the existing project website, conducting groundwater workshop(s), and supplementing or modifying the existing primer on groundwater resources in the Santa Rosa Plain.

The BAP, CCP, Water Agency staff and its consultants will develop a public outreach and communication plan. The purpose of the public outreach program is to:

- Ensure widespread support for the groundwater management plan once developed.
- Engage diverse interested parties and encourage informed community feedback while developing the groundwater management plan and during implementation.
- Enhance understanding and inform the public about water and groundwater resources in the Santa Rosa Plain and the purpose and need for the Groundwater Management Program.
- Coordinate communication and involvement among agencies, elected officials, and the general public in the groundwater management planning and implementation process.
- Employ a variety of outreach methods that make public participation easy and accessible. Hold meetings at convenient times and venues.
- Respond to public concerns and provide accurate and up-to-date information.
- Manage the public outreach program in a manner that minimizes cost and provides maximum value to the public.

Opportunities for the public to participate in the planning process of the Santa Rosa Plain Groundwater Management Program would include:

- Community Group Briefings - Community group briefing to be provided selectively upon request to give an overview of water and groundwater resources and the groundwater management planning process, to report on progress, and solicit feedback. The BAP, CCP, Water Agency staff and consultants could provide some of these briefings.
- Community Workshops - Open house style workshops to be held periodically for a variety of purposes, such as reporting on project progress and soliciting community feedback at project milestones. In addition, all BAP meetings will be open to the public.
- Interactive Website - Providing the latest news about the project, information on upcoming activities, and links for contacting with questions and/or comments. Also include an online form to request email updates and information on upcoming public participation opportunities. The website is envisioned to be a key communication media for the groundwater management plan development process.

The existing primer to Santa Rosa Plain groundwater, prepared for the preliminary planning effort under the Steering Committee, will either be modified or a supplement will be prepared to include the results of the US Geological Survey technical study. This document will be prepared for distribution in hard copy to the BAP and general public interested in the project, and also made available for download on the website. The purpose of the guide modification/supplement is to provide basic technical information, legal and water rights overview, governance options, groundwater management primer, and basic facts, figures, and frequently-asked-questions (FAQs) on water and groundwater resources in the Santa Rosa Plain.

Task 3.0 Develop Groundwater Management Goals and Basin Management Objectives (BMOs) and Adopt Resolution to Prepare GMP

Schedule: Months 7 through 10
Products: Santa Rosa Plain Groundwater Management Brief

Once the stakeholder group has enhanced its understanding of the groundwater basin, the next phase is to define the area to be covered by the plan and decide on a lead agency, which then will adopt a resolution and conduct a hearing to prepare a GMP. Prior to adopting a resolution of intention to draft the groundwater management plan, a hearing must be conducted by the lead agency to publicly announce its intention to do so. The hearing must also properly noticed in the newspaper according to Government Code section 6066. Subsequent to the conclusion of the hearing, the resolution of intention to adopt a groundwater management plan will be drafted by the lead agency, adopted and published appropriately.

The BAP will then set to work to develop the groundwater management goals for the plan and basin management objectives. An example groundwater management goal is "to provide a sustainable groundwater resource for future generations." Basin management objectives are a required component of a groundwater management plan in order to apply for specific state funding. Basin management objectives should incorporate measures

related to local control, long-term sustainability and reliability, and should address groundwater levels, groundwater quality degradation, inelastic land surface subsidence, and changes in surface flow and surface water quality that are somehow related to groundwater. These objectives could define the acceptable range of groundwater level fluctuations that would be allowed to occur within the management area and the acceptable range of groundwater quality change. Alternatively, instead of metric values, these objectives could be qualitative and narrative with a desired result, for example, maintain groundwater elevations that result in a net benefit to basin groundwater users. The group may need to conduct a series of briefings with local elected officials and interested organizations. The purpose would be to educate and seek support of the groundwater management goals and basin management objectives, including how they were developed and their content and purpose. Based on the briefings, the BAP might choose to revise the basin management objectives to reflect insights gained through the briefings, but no major changes would be anticipated. The BAP would review its goals and work plan, evaluate its progress to date, and decide to move to the next phase.

Task 4.0 Develop Basin Monitoring Program and Data Collection Protocol

Schedule: Months11 through 14
Product: Monitoring and Data Collection Protocol Agreement

Most private landowners who rely upon groundwater clearly identified well monitoring and data collection, instrumental for understanding groundwater basin levels and storage capacity, as big issues. For this reason, the way that monitoring and data collection moves forward should be subject to careful discussion and negotiation among the Basin Advisory Panel. During this phase, the Consultant will work with the BAP and/or TAC to develop protocols and a system for groundwater monitoring and data management. Participation in the monitoring program is planned to be voluntary, and would likely follow the approach taken on the Sonoma Valley GMP. Additionally, the development of a groundwater-level monitoring program could complement ongoing efforts to comply with the CASGEM program.

Task 5.0 Develop Management Components & Strategies, and Conduct Alternatives Analysis

Schedule: Months 15 through 18
Product: Management Strategy Narrative and Metrics, Output from Hydrologic Alternatives Analysis

Management components will be developed as part of the GMP as required in Water Code Section 10553.7(a)(1) to address the monitoring and management of groundwater levels, groundwater quality, inelastic land surface subsidence, and changes in surface water flow and quality that directly effect groundwater levels or quality caused by groundwater pumping. Additional management strategies and components may address conjunctive use, conservation, water use efficiency, recycled water, saline intrusion, wellhead protection, regulation and remediation of groundwater contamination,

groundwater replenishment, groundwater level and storage monitoring, well construction policies, liaison with state and federal agencies, land use coordination to prevent groundwater impacts. Management components and strategies will be developed into management component alternatives for consideration by the BAP and/or TAC and screened for inclusion into management component alternative analysis for present and future management scenarios over time.

Hydrologic analysis will be conducted using the USGS GSFLOW model for evaluation of the potential individual and combined effects of management component alternatives in the Santa Rosa Plain basin. The efforts in this task may include, but not be limited to, the analysis of effects of spatially varying groundwater extraction with some differing water supply scenarios, various conjunctive use scenarios, conservation and water use efficiency, water recycling, under level of developments as specified in existing local plans as available. In addition, the efforts will include analysis of alternative water supply scenarios to evaluate the effects on the groundwater and surface water resources in the area. The focus of the alternatives is to evaluate the effects of the future levels of development and pumping with different water supply scenarios on the groundwater and surface water resources in the Santa Rosa Plain groundwater basin. The hydrologic analysis will be completed as a joint effort of the USGS with technical input from the BAP and/or TAC, and the Consultant.

Task 6.0 Develop Implementation Approach and Compile and Prepare Groundwater Management Plan

Schedule: Months 18 through 24
Product: Santa Rosa Plain Groundwater Management Plan

In the final task, the draft groundwater management plan will be compiled and prepared for review by the BAP. The plan will contain an executive summary, and sections on the water resources setting, management goals and basin management objectives, basin monitoring and data collection program and protocols, management plan components, component alternatives analysis, implementation approach, schedule, funding and appendices. An example outline for the plan is included as Appendix C.

The final task will also concentrate on developing an implementation approach in the groundwater management plan and deciding what actions are necessary to respond to changing conditions in the groundwater basin. Proactive management will involve a developing a menu of planned and/or potential projects, costs, funding options, schedule, and prioritization, which would be negotiated amongst the BAP. Adaptive management would involve decision-making to address issues that arise that were not predictable or were not planned for. The BAP would likely want to consider some form of dispute resolution mechanism should conflicts arise.

The implementation plan and management components would be documented in the groundwater management plan. For example, the plan might address local agencies' construction or operation of recharge, storage, conservation, or water recycling. The plan

could facilitate conjunctive use operations including mutually beneficial regional groundwater recharge and recovery projects. The plan would ultimately be a culmination of all the work completed during the different phases. Public outreach would take place to inform members of the public about the overall effort documented in the plan.

Through the GMP development process as conducted in Task 1-5, the BAP will have provided input on key areas of the plan including management goals, basin management objectives, basin monitoring and data collection program and protocols, and the implementation approach, project prioritization, schedule, and funding. Additionally, it is envisioned that there will be a TAC and/or Work Groups of the BAP, which will meet regularly/as needed to review progress and provide input to the groundwater management plan as it is developed, although this will be a decision that the BAP will ultimately make. Developing the groundwater management plan will be an iterative process and some sections may require multiple iterations to satisfy all stakeholders.

Once the GMP is accepted by the BAP and prior to adopting the plan, the Lead Agency is required to will hold a hearing to provide a briefing on the GMP and the opportunity for public comments. The hearing must be properly noticed and provide the location of available copies of the plan for public review. Any landowner within the local agencies jurisdictions may file a protest prior to the conclusion of the review hearing, and the local agencies must consider all protests. If protests represent more than 50 percent of the assessed value of land in the local agency, it is considered a majority protest and the local agency may not adopt the plan.

Subsequent to the hearing to review the plan, and assuming there is not a majority protest to the plan, the plan can be adopted.

SCHEDULE

The schedule for the work plan development is included as EXCEL Project diagram in a Gantt style chart. The schedule is approximately 24 months for the project, and will be dependent upon the pace and success of the collaborative process for developing the GMP.

REFERENCES

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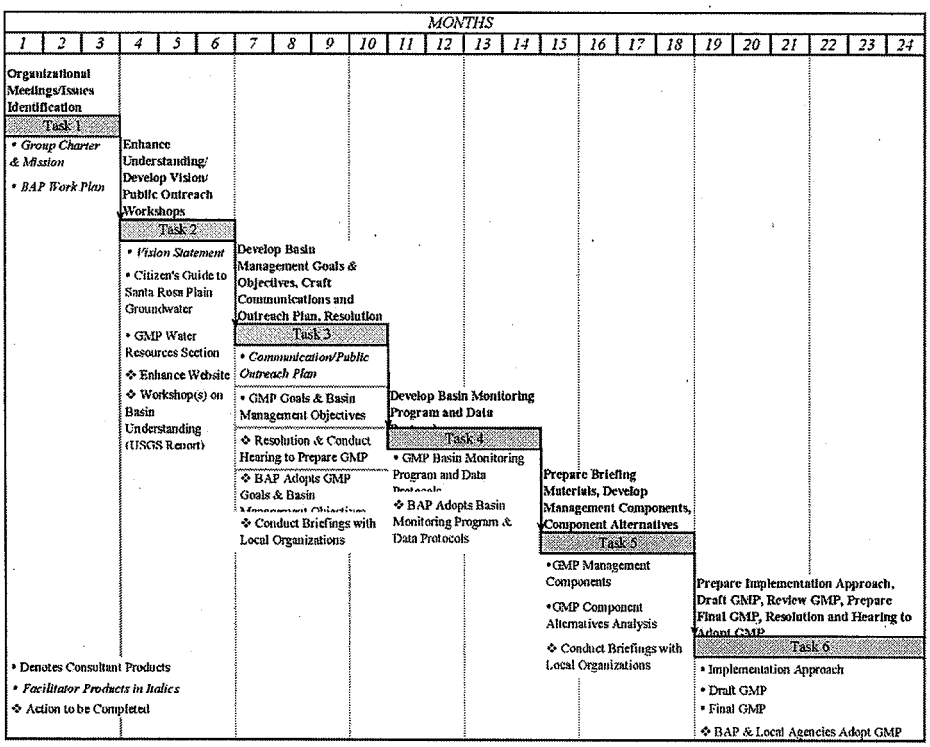
Freeze, R.A., and Cherry, J.A. 1979. Groundwater. P47. Prentice Hall, Inc., New Jersey.

Groundwater Resources Association of California (GRA). Second Edition, 2005. California Groundwater Management.

Schedule

Work Plan Tasks, Schedule, and Products
Development of Groundwater Management Plan - Santa Rosa Plain



APPENDICES

Appendix A.1 - Required and Recommended Components of Local Groundwater Management Plans

Appendix A.1 Required and Recommended Components of Local Groundwater Management Plans

Section 10750 et seq. of the Water Code, commonly referred to as Assembly Bill 3030, stipulates certain procedures that must be followed in adopting a groundwater management plan under this section. Amendments to Section 10750 et seq. added the requirement that new groundwater management plans prepared under Section 10750 et seq. must include component 1 below (SB1938 (Stats 2002, Ch 603)).

In addition, the amendments mandate that if the agency preparing the groundwater management plan intends to apply for funding administered by the California Department of Water Resources (DWR) for groundwater or groundwater quality projects, the agency must prepare and implement a groundwater management plan that includes components 2, 3, 6, 7 and 9 below. DWR recommends that all the components below be included in any groundwater management plan to be adopted and implemented by a local managing entity.

Consideration and development of these components for the specific conditions of the basin to be managed under the plan will help to ensure effective groundwater management. In developing these criteria, DWR recognizes that the goal of a groundwater management plan and the goal of an ordinance to manage groundwater should be the same—assurance of a long-term, sustainable, reliable, good quality groundwater supply. Such efforts can benefit greatly from cooperative management within the basin or region. None of the suggested data reporting in the components below should be construed as recommending disclosure of information that is confidential under State law.

1. Include documentation that a written statement was provided to the public "describing the manner in which interested parties may participate in developing the groundwater management plan," which may include appointing a technical advisory committee (Water Code § 10753.4 (b)).
2. Include a plan by the managing entity to "involve other agencies that enables the local agency to work cooperatively with other public entities whose service area or boundary overlies the groundwater basin." (Water Code § 10753.7 (a)(2)). A local agency includes "any local public agency that provides water service to all or a portion of its service area" (Water Code § 10752 (g)).
3. Provide a map showing the area of the groundwater basin, as defined by DWR Bulletin 118, with the area of the local agency subject to the plan as well as the boundaries of other local agencies that overlie the basin in which the agency is developing a groundwater management plan (Water Code § 10753.7(a)(3)).
4. Establish an advisory committee of stakeholders (interested parties) within the plan area that will help guide the development and implementation of the plan and provide a forum for resolution of controversial issues.
5. Describe the area to be managed under the plan, including:
    a. The physical structure and characteristics of the aquifer system underlying the plan area in the context of the overall basin.
    b. A summary of the availability of historical data including, but not limited to, the components in Section 7 below.
    c. Issues of concern including, but not limited to, issues related to the components in Section 7 below.
    d. A general discussion of historical and projected water demands and supplies.
6. Establish management objectives (MOs) for the groundwater basin that is subject to the plan. (Water Code § 10753.7 (a)(1)).

7. Include components relating to the monitoring and management of groundwater levels, groundwater quality, inelastic land surface subsidence, and changes in surface flow and surface water quality that directly affect groundwater levels or quality or are caused by groundwater pumping. (Water Code § 10753.7 (a)(1)). Consider additional components listed in Water Code § 10753.8 (a) through (l).
8. For each MO, describe how meeting the MO will contribute to a more reliable supply for long-term beneficial uses of groundwater in the plan area, and describe existing or planned management actions to achieve MOs.
9. Adopt monitoring protocols for the components in Section 7 (Water Code § 10753.7 (a)(4)). Monitoring protocols are not defined in the Water Code, but the section is interpreted to mean developing a monitoring program capable of tracking changes in conditions for the purpose of meeting MOs.
10. Describe the monitoring program, including:
    a. A map indicating the general locations of any applicable monitoring sites for groundwater levels, groundwater quality, subsidence stations, or stream gages.
    b. A summary of monitoring sites indicating the type (groundwater level, groundwater quality, subsidence, stream gage) and frequency of monitoring. For groundwater level and groundwater quality wells, indicate the depth interval(s) or aquifer zone monitored and the type of well (public, irrigation, domestic, industrial, monitoring).
11. Describe any current or planned actions by the local managing entity to coordinate with other land use, zoning, or water management planning agencies or activities (Water Code § 10753.8 (k), (l)).
12. Provide for periodic report(s) summarizing groundwater basin conditions and groundwater management activities. The report(s), prepared annually or at other frequencies as determined by the local management agency, should include:
    a. Summary of monitoring results, including a discussion of historical trends.
    b. Summary of management actions during the period covered by the report.
    c. A discussion, supported by monitoring results, of whether management actions are achieving progress in meeting MOs.
    d. Summary of proposed management actions for the future.
    e. Summary of any plan component changes, including addition or modification of MOs, during the period covered by the report.
    f. Summary of actions taken to coordinate with other water management and land use agencies, and other government agencies.
13. Provide for the periodic re-evaluation of the entire plan by the managing entity.
14. For local agencies not overlying groundwater basins, plans should be prepared including the above listed components and using geologic and hydrologic principles appropriate to those areas (Water Code § 10753.7 (a)(5)).

Appendix A.2 – Groundwater Management Plans

A.2 Groundwater Management Plan Elements

Effective, comprehensive groundwater management requires defining goals and basin management objectives, plans for action to meet management objectives, and a plan for implementation. A groundwater management plan provides a road map for solving problems and new opportunities by outlining the powers, procedures, actions, budget and timetable for a groundwater management program. An effective groundwater management plan and program will result in more effective use of the groundwater resource in conjunction with surface water. The five elements of groundwater management are:

1. Political – The political process is the collective means to legitimize and prioritize decision-making and value judgments. The local community makes authoritative choices among alternatives through political groundwater management. To help satisfy the political process, a groundwater management plan should be prepared in a collaborative, consensus-based stakeholder process, with representative stakeholder input during development of management objectives, conflict resolution, and during implementation of the resulting groundwater management program.
2. Legal – Water rights, the most controversial, fundamental issue in groundwater management is a legal issue. Groundwater rights, and in many cases, surface water rights must be addressed no matter what groundwater management approach is taken in a basin. The legal aspects of groundwater management are very complex and are explained in more detail in subsequent sections.
3. Institutional – The jurisdictional question of who is to govern and how management will be achieved is key to developing and successfully implementing a groundwater program. The institutional element of groundwater management is explained in more detail in subsequent sections.
4. Technical – Understanding the unique physical, chemical, and hydrogeological characteristics is essential to developing an effective groundwater management plan. The US Geological Survey is conducting a groundwater basin assessment for the Santa Rosa Plain, which will assist in providing a technical understanding of the Santa Rosa Plain.
5. Economic – Determining and being able to afford the cost of groundwater management plan implementation is another basic requirement for developing a good plan and successfully implementing an effective groundwater management program. Intricately linked with the "determining and being able to afford the cost of groundwater management" is deciding who should pay and how much. Additionally, economic justification of groundwater management plan implementation should always include the cost of not implementing a groundwater management program, a much more difficult cost to factor.

A.2.1 Groundwater Legal

California has a complex system of groundwater law, rights, and policy that has evolved through legislative and court battles over the last century and a half. The law has traditionally differentiated surface water and groundwater rather than regulating water resources through a system that fully integrates the two, in spite of nature and the Earth's hydrologic system. This differentiation of surface water and groundwater, regulation of surface and non-regulation of groundwater, has made groundwater vulnerable to adverse

impacts from non-sustainable extraction, making effective and coordinated groundwater management a necessity in most basins.

A.2.2 Reasonable and Beneficial Use

All water resource use in California, including groundwater, is subject to the constitutional requirement of reasonable and beneficial use (California Constitution, Article X, Section 2). In general terms, beneficial use has been held to include domestic, agricultural, industrial, general municipal use, social, recreational, or instream use. Water rights holders must demonstrate that the use is both reasonable and beneficial.

A.2.3 Legal Character of Groundwater

"Groundwater" is technically defined as subsurface water that occurs in soils and the pore spaces or openings in geologic formations that are fully saturated at a positive pressure (Freeze and Cherry, 1979). In California, groundwater is classified based on its character and distribution as either:

1. Percolating groundwater – water that oozes, seeps, or filters through the soil by gravity; a vast mass of water confined in a basin, always moving toward some stream or outlet. Percolating groundwater is not subject to permitting by the State Water resources Control Board (SWRCB).
2. A subterranean stream flowing through known and defined channels – most frequently characterized by the State as moving through permeable material, typically alluvium, which underlies or comprises the bed of a stream in its natural state and is essential to the existence of the stream; legally considered to be flowing within a subterranean stream because the beds and banks surrounding the subsurface channel deposits are relatively impermeable. Groundwater flowing with a subterranean stream is subject to regulation governing surface water and permitting jurisdiction of the SWRCB.

Nearly all groundwater in California is considered percolating groundwater. By legal definition, all groundwater that is not subsurface flow or groundwater within a known and defined channel is considered to be percolating groundwater. For groundwater to be classified as a subterranean stream flowing through a known and defined channel, the SWRCB has generally considered that the following four physical conditions must exist:

1. A subsurface channel must be present;
2. The channel must have relatively impermeable beds and banks;
3. The course of the channel must be known or capable of being determined by reasonable inference; and
4. Groundwater must be flowing in the channel.

Absent evidence of the existence of the four physical conditions listed above, groundwater is presumed to be percolating groundwater, and not a subterranean stream.

A.2.4 Groundwater Rights

California has developed a unique system of water rights in which overlying, appropriative and prescriptive rights are all recognized under specific conditions. Table 2

provides summary information on the principal groundwater rights in California and relative priorities of rights.

Table 2 California Groundwater Rights	
Overlying Right	Correlative between overlying owners. Prior and paramount to appropriative right.
	Arise solely from property ownership, and thus are generally not limited in quantity by the history or frequency of water use.
	Actual historic production maintained against prescription through doctrine of "self-help."
Appropriative Right	First-in-time, first-in-right as between appropriators.
	Junior to overlying right.
	Defined by the historical quantity of use.
	May be forfeited (i.e., lost) by non-use.
Prescriptive Right	Acquired by actual, open, notorious, adverse, exclusive and continuous use for a period of five years.
	Cannot be acquired against public utilities, municipalities, or other public entities.
	Limited to extent of maximum annual "self-help" (i.e., production by overlying owners during prescriptive period).

A.2.5 Overlying Rights

Overlying rights are incidental to the real property and allow the landowner extract groundwater from beneath the property for use on the overlying parcel. Overlying rights arise solely and exclusively from the property ownership, and therefore are not generally limited by historical record of past groundwater use, nor can they be lost by non-use. Overlying rights are correlative rights, that is, they are of equal priority to adjacent landowners, but are superior to appropriative rights. Basically, California landowners have a correlative right to extract as much groundwater as they can put to beneficial use. No state permit is required to drill a well and pump groundwater, however, ministerial permits may be required in regard to the construction of the well, for example from the Department of Health Services or pursuant to local building ordinances. Unless the basin has been adjudicated or other local ordinances apply, no governmental permission is required to produce groundwater.

A.2.6 Appropriative Rights

Appropriative rights involve the act of diverting the groundwater from its source and applying the water to a beneficial use, typically for municipal use, and do not attach to the overlying land. Appropriative rights are not considered overlying rights, and are junior to overlying rights, meaning that overlying rights have priority over appropriative rights. Further, the law only allows the appropriation of that quantity of groundwater that is a surplus in the basin or sub-basin to the present cumulative needs of overlying groundwater users. If no surplus groundwater exists, overlying landowners may bring court action to stop the taking of water by appropriators. Priority of rights between appropriators is based on the rule "first-in-time, fist-in-right": when surplus groundwater

supplies are exceeded, the most junior (youngest) rights are extinguished first, and most senior (oldest) rights are extinguished last. Appropriative rights are based on the historical quantity of use and may be forfeited (lost) by non-use.

A.2.7 Groundwater Rights, Safe Yield and Overdraft

The concepts of safe yield and overdraft become important when disputes arise within a groundwater basin, as all groundwater rights, whether overlying or appropriative, may be limited by the concept of "safe yield". Safe yield, which is a somewhat debated term, is generally considered to mean "the maximum quantity of water which can be withdrawn annually from a groundwater supply under a given set of conditions without causing an undesirable result" (GRA, 2005). Undesirable results are generally considered to refer to unwanted changes such as water quality degradation, seawater intrusion, land subsidence, uneconomic use of groundwater, caused by a gradual lowering of groundwater levels which may induce adverse basin impacts.

If the cumulative groundwater production exceeds the basin's safe yield, the basin is considered to be in a state of overdraft. Overdraft occurs where the trend of historic groundwater level measurements indicate a continual drop in groundwater levels over time, even after wet year conditions. If the cumulative production does not exceed the safe yield, the basin is considered to be in a state of surplus.

The concept of safe yield is typically the focal point of groundwater basin adjudication, and is used to establish the groundwater rights in the basin, although typically it is after groundwater levels have dropped significantly and the basin is in overdraft. Further, safe yield is the potential trigger for financing replenishments and the requirement for establishing prescriptive rights.

A.2.8 Prescriptive Rights

A party may claim prescriptive rights to groundwater once the basin has been in a condition of overdraft for a period of more than five years by showing that the groundwater use has been actual, notorious, adverse, exclusive and continuous for a period of at least five years. A prescriptive right is a right acquired by a party who openly uses the water to which another party has an existing prior right. The establishment of a prescriptive right may provide an appropriator with an equal or superior right to extract groundwater to that of overlying landowners, based on the record of extractions during the prescriptive period. Prescriptive rights cannot be acquired against public utilities, municipalities, or other public entities. Overlying owners can help preserve their overlying right by continuing to pump and use water for reasonable and beneficial uses under the doctrine of "self-help." Filing in court for "injunctive relief" as soon as overdraft begins is a legal means to fight prescription, although it can be very expensive and cost-prohibitive to an individual landowner.

A.2.9 Groundwater Management Institutions

In California, the regulation and management of groundwater has been left to local control at least partly because of a general preference for local, hands-on management. Virtually every legislative attempt to manage groundwater at a statewide level over the

past 100 years has been met with significant opposition. State-level groundwater management is generally limited to the collection of groundwater level and pumping data in certain areas and the formulation of well construction and abandonment procedures. California groundwater management institutions include:

- Groundwater Management Plan (AB 3030 Plan)
- Statutory Authority in the California Water Code and Special Legislation
- City and County Ordinances
- Coordinated Agreements
- Adjudicated Groundwater Basins

The most common form of groundwater management by institution is through the development of an AB 3030 plan, which is a voluntary and non-regulatory approach. According to DWR, there are more than 200 agencies that have participated in AB 3030 plans, and more than 120 of those involve coordinated plans with other agencies. Groundwater management under an AB 3030 plan is the desired approach for the Santa Rosa Plain, and the procedure and requirements are described in more detail in the next section.

Another form of groundwater management is through the California Legislature enacting statutes establishing several special act agencies and groundwater management districts. These special act agencies and districts can enact ordinances to regulate the amount of groundwater that is extracted and limit its place of use within the district's boundaries. There are 22 kinds of general act districts or local agencies identified in the California Water Code with specific statutory provisions to manage surface water. Some of these agencies have specific statutory authority to exercise some form of groundwater management; some have exercised their authority and others have not.

Cities and counties have the right to regulate groundwater under their police power of the state, in an effort to promote the health, safety and welfare of citizens. For example, in one county ordinances were enacted prohibiting the mining of groundwater within the county, or extraction of groundwater for export without a permit granted by the County Board. Ordinances have been enacted in 28 counties in the state; Sonoma has no such ordinance.

Groundwater management can be accomplished among local water purveyors in a basin through a general coordinated agreement. Technical basin analysis and development of a groundwater basin model can be completed through such an agreement. Joint capital projects and joint operational policies can also be accomplished through a coordinated agreement. Enforcement actions and fee collections may be jointly shared among the parities of a coordinated agreement.

Several challenges are associated with the coordinated agreement approach. While contractual arrangements are often useful in resolving individual issues between purveyors, these arrangements are much more difficult to utilize as groundwater management issues become more complex. More important, however, is the use of groundwater by other parties in the basin such as overlying owners. Effective groundwater management may require these parties to also become signatories to the

coordinated agreement, and overlying owners' groundwater interests are often divergent from the interests of the purveyors. Consequently, complete representation of all of the basin users is more difficult under a contractual arrangement approach.

Adjudication is that form of groundwater management where the courts define the amount of groundwater that can be extracted under the landowners' correlative rights. Adjudication occurs when there have already been adverse impacts from extraction in a groundwater basin or sub-basin and landowners and other overlying parties have not been able to settle the dispute over how much groundwater can rightfully be extracted by each landowner and other party. The plaintiffs must pay for court-directed studies using the available data, in order to arrive at an equitable distribution of the groundwater that is available on an annual basis. These court-directed processes can be lengthy and very costly, although some have been resolved with a court-approved negotiated settlement, called a stipulated judgment.

A.2.10 Groundwater Management Act (AB 3030)
In response to mounting pressure for authorization for groundwater management legislation, a systematic procedure for an existing local agency to develop a groundwater management plan was added to the California Water Code Section 10750 et.seq., in 1992. The legislation is commonly referred to as AB 3030 and it provides authority and encouragement to local agencies to work cooperatively and engage in groundwater management programs on a regional or basin-by-basin approach. The legislation is applicable to all groundwater basins in California with some exceptions: areas previously subject to management by a local agency, special act district or water pursuant to court order. A local agency must first obtain the consent of another local agency water purveyor, a regulated investor-owned utility, or a mutual water company to manage groundwater within their boundaries. A groundwater management plan does not apply to the extraction of groundwater to serve a single-family residence, except in the case of basins previously identified as "critically overdrafted" in Department of Water Resources Bulletin 118-80.

If a local agency provides water service, the agency may adopt a groundwater management plan by resolution or by ordinance and implement the plan within its service area. Prior to adopting a resolution of intention to draft a groundwater management plan, the local agency is required to hold a hearing after publishing notice pursuant to Government Code 6066. The notice must indicate that the agency is considering the adoption of a management plan pursuant to California Water Code Section 10750 et. seg. After conducting a hearing, the local agency may then draft a resolution of intention to adopt a groundwater management plan. Within two years of the date the initial resolution is adopted by the agency, the groundwater management plan must be prepared and adopted. After the plan is prepared, but prior to final adoption, a second hearing must be conducted with information available on the plan. If the groundwater management plan is not prepared and adopted within two years, a new resolution of intention must be adopted.

There are no legally required components of a groundwater management plan under AB 3030. Voluntary components that the plan may address and procedures for adopting rules and regulations to implement the plan are provided in California Water Code Section 10750 et. Seg. (Provided in Appendix A). However, the Amendments to Section 10750 et seq. (SB1938 [Stats 2002, Ch 603]) added the requirement that new groundwater management plans prepared under Section 10750 et seq. must include documentation that a written statement was provided to the public "describing the manner in which interested parties may participate in developing the groundwater management plan," which may include appointing a technical advisory committee (Water Code § 10753.4 (b)).

There are certain requirements to obtain state funding for groundwater projects. These requirements are provided in Appendix A, and include:

1) Provide documentation that a written statement was provided to the public "describing the manner in which interested parties may participate in developing the groundwater management plan," which may include appointing a technical advisory committee (Water Code § 10753.4 (b)).
2) Include a plan by the managing entity to "involve other agencies that enables the local agency to work cooperatively with other public entities whose service area or boundary overlies the groundwater basin." (Water Code § 10753.7 (a)(2)). A local agency includes "any local public agency that provides water service to all or a portion of its service area" (Water Code § 10752 (g)).
3) Provide a map showing the area of the groundwater basin, as defined by DWR Bulletin 118, with the area of the local agency subject to the plan as well as the boundaries of other local agencies that overlie the basin in which the agency is developing a groundwater management plan (Water Code § 10753.7 (a)(3)).
4) Establish management objectives (MOs) for the groundwater basin that is subject to the plan. (Water Code § 10753.7 (a)(1)).
5) Include components relating to the monitoring and management of groundwater levels, groundwater quality, inelastic land surface subsidence, and changes in surface flow and surface water quality that directly affect groundwater levels or quality or are caused by groundwater pumping. (Water Code § 10753.7 (a)(1)). Consider additional components listed in Water Code § 10753.8 (a) through (l).
6) Adopt monitoring protocols for the components in Section 7 (Water Code § 10753.7 (a)(4)). Monitoring protocols are not defined in the Water Code, but the section is interpreted to mean developing a monitoring program capable of tracking changes in conditions for the purpose of meeting MOs.

Appendix B - Santa Rosa Plain Assessment Report and Steering Committee Recommendation

Appendix C - Example Outline for a Groundwater Management Plan

Example Outline for a Groundwater Management Plan

Executive Summary
Introduction
- Formation of Lead Agency
- Preparation of this GMP Under the Basin Advisory Panel
- Purpose of the Santa Rosa Plain GMP
- Authority to Prepare and Implement a GMP
- GMP Components

Water Resources Setting
- Groundwater Supplies
  - Hydrogeologic Setting
  - Groundwater Quality
  - Recharge and Extraction of Groundwater
- Surface Water Supplies
  - Water Rights/Contract Entitlements
  - Surface Water Conditions
  - Surface Water Quality
- Recycled Water Supplies
- Existing Facilities and Operations
  - Groundwater Facilities
  - Surface Water Facilities
- Future Facilities and Operations
- Water Year Types
- Water Use by Year Type

Management Plan Elements
- Groundwater Management Goal
- Basin Management Objectives
  - Examples:
    - Maintain or improve groundwater quality in the Santa Rosa Plain for the benefit of basin groundwater users
    - Protect against adverse impacts to groundwater from Thermal waters and seawater intrusion
    - Maintain groundwater elevations that result in a net benefit to basin groundwater users
    - Protect against adverse impacts to water quality resulting from the interaction between groundwater and surface water flows in the major watercourses
    - Protect against adverse impacts to surface water flows in Sonoma Creek and other watercourses
    - Protect against any potential inelastic land surface subsidence

- GMP Components
- Component Category 1: Stakeholder Involvement
  - Involving the public
    - Actions
  - Public education
    - Actions
  - Involving other agencies within and adjacent to Santa Rosa Plain
    - Actions
  - Utilizing advisory committees
    - Actions
  - Developing relationships with state and federal agencies

- Actions
- Pursuing partnership opportunities
  - Actions

Component 2: Monitoring Program

- Groundwater elevation monitoring
  - Actions
- Groundwater quality monitoring
  - Actions
- Land surface elevation monitoring
  - Actions
- Surface water-groundwater interaction monitoring
  - Actions
- Protocols for the collection of groundwater data
  - Actions
- Data management system
  - Actions

Component Category Three: Groundwater Resources Protection

- Well construction policies
  - Actions
- Well abandonment and destruction policies
  - Actions
- Wellhead protection measures
  - Actions
- Protection of recharge areas
  - Actions
- Control of the migration and remediation of contaminated water
  - Actions
- Control of saline water intrusion
  - Actions

Component Category Four: Groundwater Sustainability

- Demand Reduction
  - Water conservation
  - Water recycling
  - Actions
- Conjunctive management activities
  - Actions

Component Five: Planning Integration

- Existing integrated planning efforts
  - Water Efficiency
  - Urban water management
  - Regional sanitation
  - DWSAP Program
  - Land use planning
  - Actions

Plan Implementation

Annual GMP Implementation Report

Component-Action Implementation Schedule List

Future Review of GMP

Financing

EXHIBIT C

Cost Allocation

Proposed Cost Allocation for Santa Rosa Plain Groundwater Management Plan Development

With $110K Funding from IRWM Planning Grant applied toward consultant costs and $30,000 contribution from DWR									
	Consultant Costs Total	SCWA 52.0%	SR 16.0%	RP 13.6%	SEB 2.8%	Cotati 3.9%	Windsor 4.4%	Cal-Am 4.5%	COS 2.8%
FY 11/12	$ 130,000	$67,600	$20,800	$17,680	$3,640	$5,070	$5,720	$5,850	$3,640
FW 12/13	$ 130,000	$ 67,600	$ 20,800	$ 17,680	$ 3,640	$ 5,070	$ 5,720	$ 5,850	$ 3,640
Combined	**$ 260,000**	**$ 135,200**	**$ 41,600**	**$ 35,360**	**$ 7,280**	**$ 10,140**	**$ 11,440**	**$ 11,700**	**$7,280**

Notes:
Assumes facilitation costs of $95K per year, technical consultant costs of $105K per year.