A Tradition of Stewardship
A Commitment to Service

Napa County
Groundwater Resources
Advisory Committee

AGENDA

SPECIAL COMMITTEE MEETING

Monday, December 12, 2011, 2:00 p.m.

Agricultural Commissioner's Office/UCCE Conference Room
1710 Soscol Avenue, Napa CA

Committee Members

Michelle Benvenuto
Tucker Catlin
Alan Galbraith
Donald Gleason
David Graves
Michael Haley
Peter McCrea
Charles Slutzkin
Steve Soper
Marilee Talley
William Trautman
James Verhey
Susanne von Rosenberg
Duane Wall
Dale Withers

1. CALL TO ORDER & ROLLCALL

2. WELCOME & OPENING REMARKS
(Staff, Consultant, Committee)

3. ORGANIZATIONAL ITEMS *(5 minutes)*
(Staff, Consultant, Committee)
   a. APPROVAL OF ACTION MINUTES & MEETING SUMMARY
   b. REVIEW & ADOPT AMENDED BYLAWS

4. PUBLIC COMMENT
In this time period, anyone may comment to the Committee regarding any subject over which the Committee has jurisdiction, or request consideration to place an item on a future Agenda. No comments will be allowed involving any subject matter that is scheduled for discussion as part of this Agenda. Individuals will be limited to a three-minute presentation. No action will be taken by the Committee as a result of any item presented at this time. *(Chair)*

5. PRESENTATIONS AND DISCUSSION ITEMS
   a. NAPA COUNTY GROUNDWATER STUDY RESULTS - PART II *(65 minutes)*
   (Vicki Kretsinger Grabert, Luhdorff & Scalmanini Consulting Engineers)

COMMITTEE BREAK *(15 minutes)*

   b. CASGEM PROGRAM UPDATE (45 MINUTES)
   (Phil Miller, Deputy Director/Public Works)
      - CASGEM Plan and Workplan
      - Volunteer well monitoring/outreach
      - County Compliance & Next Step

1195 Third Street,
Suite 210
Napa, CA
94559

Tel: 707-253-4417
Fax: 707-253-4336

5. PRESENTATIONS AND DISCUSSION ITEMS *(cont'd)*

   c. DRAFT PLAN FOR PUBLIC OUTREACH/EDUCATION (25 MINUTES)
   (Dorian Fougeres, Center for Collaborative Policy)

6. OTHER BUSINESS *(5 minutes)*

   a. GROUNDWATER RFP/CONSULTANT SELECTION UPDATE
   (Patrick Lowe, Deputy Director/CDPD)

7. ANNOUNCEMENTS *(5 minutes)*

8. FUTURE AGENDA ITEMS *(5 minutes)*

   a. COMPONENTS OF A MONITORING PROGRAM (FEB. MTG)
   (Patrick Lowe, Deputy Director/CDPD)

9. ADJOURNMENT to the NEXT MEETING (*Chair)*

   Thursday, February 23, 2012 – 2:00pm
   Agricultural Commissioner's Office/UCCE Conference Room
   1710 Soscol Avenue, Napa CA

Note: Where times are indicated for agenda items they are approximate and intended as estimates only, and may be shorter or longer, as needed. If requested, the agenda and documents in the agenda packet shall be made available in appropriate alternative formats to persons with a disability. Please contact Greg Morgan at 707-259-8621, 804 first St., Napa CA 94559 to request alternative formats.

A Tradition of Stewardship
A Commitment to Service

Napa County
Groundwater Resources
Advisory Committee

ACTION MINUTES
NAPA COUNTY GROUNDWATER RESOURCES ADVISORY COMMITTEE MEETING
October 27, 2011

1. CALL TO ORDER & ROLL CALL

The Napa County Groundwater Resources Advisory Committee (GRAC) met in regular session on Thursday, October 27, 2011 with the following members present:
Steve Soper; Duane Wall; Bill Troutman; Marilee Talley; Dale Withers; Susanne von Rosenberg; Charles Slutzkin; Jim Verhey; Peter McCrea; Michael Haley; Michelle Benvenuto; Tucker Catlin; Don Gleason; and Alan Galbraith. Dave Graves arrived during Item 2.

2. WELCOME & INTRODUCTIONS

The 15 members of the committee introduced themselves and briefly stated their affiliation with groundwater interests, their reason for joining the committee, and what their participation can contribute. Various County staff was also introduced, as well as the meeting moderator.

3. ORGANIZATIONAL ITEMS

a. ELECT CHAIR/VICE CHAIR

Peter McCrea was nominated and elected as Chair. Tucker Catlin was nominated and elected as Vice Chair.

Vote: Unanimous

b. REVIEW NOTEBOOK/WEBSITE/STAFF CONTACTS

Patrick Lowe, Deputy Director, Conservation, Development and Planning, reviewed with the committee reference materials contained in notebooks for their use, such as a copy of the Resolution creating the committee and its Bylaws, meeting calendar, workplan, collaboration guidelines, members and staff contact information, a section for agendas and minutes, and background information containing the GRAC's website address and a CD containing various groundwater documents.

c. REVIEW/ADOPT BYLAWS

Dorian Fougères, Mediator, Center for Collaborative Policy, CSUS, presented the Bylaws to the committee. The Bylaws were adopted as presented. [Note: Under Item 3d the Committee subsequently amended the Bylaws following review of the Meeting Calendar (see below)]

Vote: Unanimous

d. REVIEW/ADOPT MEETING CALENDAR & WORKPLAN

Hillary Gitelman, Director, Conservation, Development and Planning, presented the meeting calendar and went over the workplan with the committee. The meeting calendar and workplan were adopted with the following amendment to the calendar: Change the meeting date of December 15, 2011 to December 12, 2011. A motion was made and approved to amend Item II.B of the Bylaws to change the meeting start time from 3:00 p.m. to 2:00 p.m. The requested amendment will go before the Board of Supervisors for approval.

Vote: Unanimous

e. REVIEW/ADOPT COLLABORATION GUIDELINES

Dorian Fougères, Mediator, Center for Collaborative Policy, CSUS, went over the collaboration guidelines with the committee. Mr. Fougères agreed to provide an "issue bin" for committee members to later discuss items that may come up during the course of meeting discussion but are not agendized. The collaboration guidelines were adopted as presented.

Vote: Unanimous

f. PRESENTATION/DISCUSSION OF BROWN ACT

Janice Killion, Deputy County Counsel, distributed a PowerPoint handout and discussed key components of the Brown Act and how they are applied to committees and the manner in which public meetings are conducted. Ms. Killion will research if an ad hoc committee can meet with a County resident who has expertise or a special interest and not be subject to the Brown Act.

4. PUBLIC COMMENT

Lavern Mack, via conference telephone, stated he has lived on Fourth Avenue in the Coombsville area since 1947 and has learned a lot about groundwater, wells, and the aquifer and would be willing to share anything he's learned to anyone on the committee or others who would be interested. Mr. Mack also appreciated the opportunity to listen to the meeting via telephone and commended all of the members for volunteering to be on the committee.

5. BREAK

6. PRESENTATIONS AND DISCUSSION ITEMS

a. COUNTY POLICIES REGARDING GROUNDWATER

Hillary Gitelman, Director, Conservation, Development and Planning, distributed a handout containing the water resources goals, policies, and action items from the Napa County General Plan. Ms. Gitelman briefly went through the handout, specifically mentioning Goals CON 10

through CON 12; Policies CON 44(d), 51, 52, 52.5, 53, 57, 59, and 63; and Action Items WR-5, WR-6, WR-8.

b. STAKEHOLDER ASSESSMENT FINDINGS

Dorian Fougères, Mediator, Center for Collaborative Policy, CSUS, presented a PowerPoint presentation on the assessment of the County's groundwater stakeholder interests and concerns, as further detailed in the Final Report contained in the agenda packet. Mr. Fougères went over key findings of the assessment, as well as conclusions and recommendations.

c. NAPA COUNTY GROUNDWATER STUDY RESULTS – PART I

Vicki Kretsinger Grabert, Principal Hydrologist, Luhdorff & Scalmanini Consulting Engineers, presented a PowerPoint presentation on the County's comprehensive groundwater monitoring program recommendations report. Ms. Kretsigner Grabert provided an overview of the overall purpose of study and the components involved, such as collecting data, evaluating the quality of data, researching the tools the County has available, assessing groundwater conditions, review of the Groundwater Ordinance and well permitting processes by the County, and development of recommendations. An executive summary of the study was contained in the agenda packet, and the large number of documents used for data gathering can be found on the GRAC's website, and for the committee members, on the CD contained in their notebooks. Hillary Gitelman, Director, Conservation, Development and Planning, suggested to the committee members that if they have general groundwater questions or very specific questions related to the study to email them to Patrick Lowe, Deputy Director, Conservation, Development and Planning, in advance of the December meeting. Dorian Fougères, Mediator, Center for Collaborative Policy, CSUS, added that a recommended timeline to email the questions would be sent to the committee members in a follow-up email.

7. OTHER BUSINESS

a. CASGEM UPDATE

Phil Miller, Deputy Director-Flood Control and Water Resources, Public Works, reported on the State legislated mandate to monitor all groundwater basins within California. With the help of Vicki Kretsinger Grabert, Principal Hydrologist, Luhdorff & Scalmanini Consulting Engineers, the County has submitted its California Statewide Groundwater Elevation Monitoring (CASGEM) work plan to the State's Department of Water Resources and is awaiting their response. There are 25 wells included in the plan, the majority of which are located in the Napa Valley sub-basin. The County will be conducting outreach efforts to find additional wells in other sub-basins outside the Napa Valley floor over the coming year.

b. GROUNDWATER RFP/CONSULTANT SELECTION UPDATE

Patrick Lowe, Deputy Director, Conservation, Development and Planning, stated that a request for proposal was sent out to find a consultant to assist the County with its continued groundwater monitoring efforts. A total of six proposals were received, of which three entities were offered interviews. Mr. Lowe asked if there was a committee member willing to help conduct interviews on Wednesday, November 9 from 9:00 a.m. to Noon. Dave Graves volunteered to be on the interview panel.

8. ANNOUNCEMENTS

None were mentioned.

9. FUTURE AGENDA ITEMS

- **Napa County Groundwater Study Results – Part II**
- **Guidelines for confidentiality**
- **CASGEM presentation**
- **Update on voluntary well monitoring and public outreach to date**
- **Draft plan for public outreach and education**

10. ADJOURNMENT to the NEXT MEETING

Adjourned to the next regular meeting of the Napa County Groundwater Resources Advisory Committee on Monday, December 12, 2011 at 2:00 p.m.

Vote: Unanimous

_____
PETER McCREA, Chairperson

ATTEST:

_____
PATRICK LOWE, Secretary

_____
By: GREG MORGAN, Supervising Office Assistant

Voting Key

If not unanimous, member votes will be tallied (N = No; X = Excused; A = Abstained) using the following Committee Member abbreviations:

MB = Michelle Benvenuto; TC = Tucker Catlin; AG = Alan Galbraith; DG1 = Donald Gleason; DG2 = Dave Graves; MH = Michael Haley; PM = Peter McCrea; CS = Charles Slutzkin; SS = Steve Soper; MT = Marilee Talley; BT = Bill Trautman; JV = Jim Verhey; SVR = Susanne von Rosenberg; DW1 = Duane Wall; DW2 = Dale Withers

Example Key:

MB	TC	AG	DG1	DG2	MH	PM	CS	SS	MT	BT	JV	SVR	DW1	DW2

Draft

MEETING SUMMARY

Napa County Groundwater Resources Advisory Committee Meeting
October, 27, 2011

Recorded by Taralyn Atkins-Brown
Facilitation Assistant
Center for Collaborative Policy, CSUS

Meeting Summary

The Napa County Groundwater Resources Advisory Committee (GRAC) held its inaugural meeting on October 27, 2011. The meeting oriented members as to the role, organization, and resources of the committee, to existing County policies, and to research and data currently available. Members introduced themselves and learned what affiliations and experience each brings to the Committee. Members selected Peter McCrea and Tucker Catlin as chair and vice chair, respectively. The Committee adopted its bylaws, calendar, work plan and collaborative guidelines. Subsequent presentations included a review of the Brown Act by the County Counsel's Office; existing County policies on groundwater by the Planning Department; and the stakeholder assessment conducted by the Center for Collaborative Policy, CSUS. The final presentation was the first of two parts on a recent Napa County Groundwater Conditions and Monitoring Recommendations Study conducted by Luhdorff and Scalmanini Consulting Engineers; this presentation and discussion will continue at the Committee's next meeting set for December 12, 2011 at 2:00PM. Please see the GRAC's webpage (www.countyofnapa.org/bos/grac) for copies of the October 27, 2011 presentations and handouts.

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Action Items

1. **MR. LOWE** will take the requested changes to the bylaws to the Board of Supervisors for approval of a 2:00 p.m. start time for GRAC.
2. **MS. KILLION** will investigate and confirm whether the bylaw (V. SUBCOMMITTEES paragraph 2) regarding residents of the county with special expertise or interest is not subject to the Brown Act, or request a change to the bylaws to address this.
3. **ALL GRAC MEMBERS** will send questions and requests for basic information on groundwater monitoring and the study completed by Luhdorff & Scalmanini Consulting Engineers in advance of the next meeting to shape the presentation.
4. **MR. LOWE BY WEDNESDAY, NOVEMBER 2** will supply Mr. Graves with materials to prepare him for participating in the consultant selection process.

1. Call to Order & Roll Call

All committee members were in attendance.

2. Welcome & Introductions

Hillary Gitelman, Director, Napa County Conservation, Development and Planning (CDPD), opened the meeting, welcomed members of the Groundwater Resource Advisory Committee (GRAC), and expressed enthusiasm for the collaborative effort ahead. Don Ridenhour, Director, Napa County Public Works, and additional staff supporting the Committee identified themselves. Dorian Fougères, Facilitator, Center for Collaborative Policy (CCP), CSUS, also introduced himself. GRAC members then introduced themselves, noting their backgrounds, affiliations, and key desires for the process, as well as what they will contribute. A supplemental table identifies members, the geographic region where they reside, and their broad interests.

Ms. Gitelman explained that county staff will support the GRAC. This includes an interdepartmental working group that meets monthly, and will help plan for the GRAC meetings. The group includes executives and staff from Planning, Public Works, Environmental Management, Flood Control, and the County Executive Office.

3. Organizational Items

a. Election of Chair/ Vice Chair

AGREEMENT: The GRAC unanimously agreed to have Mr. Peter McCrea serve as the Chair, and Mr. Tucker Catlin serve as the Vice Chair.

b. Review Notebook/Website/Staff Contacts

Each member's folder contains a calendar with meeting dates and locations; a work plan; collaboration guidelines; and staff contact information. (Corrections to names and contact information were collected and corrections will be provided to members in an update.) The website www.countyofnapa/org/bos/grac was highlighted as a source of electronic materials including meeting handouts, presentations, and research and background information. Future information will also be distributed via email and posted to the website; members may request hard copies.

c. Review/Adopt Bylaws

Mr. Fougères made special note to page 8 section "D" of the bylaws with the sentence "Whenever possible the GRAC shall seek consensus." He explained this should be interpreted to mean GRAC will make good faith effort to discuss and understand concerns from all and to explore and generate inclusive solutions. Consensus means that each member either supports a decision or agreement, or is neutral and is willing to stand aside. If, however, a member will block or oppose a decision, or cannot support it until changes are made, there is no consensus. The facilitator's role is to help the Committee have a meaningful and productive dialogue that advances consensus. If the Committee makes a sincere effort and still cannot reach consensus, it may provide the County with more than one recommendation, or may choose to vote. Voting is considered a last resort, and the hope is that it will seldom be needed.

DISCUSSION

- **Votes for Action:** Clarification was requested with section D, *Number of Votes Required for Action,* and a perceived discrepancy with a tie vote being considered "denial of the motion" and the requirement to have a 2/3 majority to pass.

AGREEMENT: The group agreed to interpret the bylaw to mean anything below 2/3 majority is a denial of the motion. For example, a 60% to 40% vote would be denied.

- **Time for Public Comment:** A request was made to provide the public more than three-minutes per address as needed. It was noted that the Chair has the authority and discretion to provide for more time for public address during meetings or may invite the member to present as an agenda item at a future GRAC meeting. Janice Killion, Deputy County Counsel, advised special care be taken to ensure equal opportunity among public attendees and to limit exceptions.

- **Conflict of Interest:** The intent of section E, *Voting Affected by Conflict of Interest,* was questioned, given that members were chosen for their stakeholder and geographic representation and thereby may have conflicts of interest. It was clarified that members first and foremost are required to represent the interests of the public in Napa County as a whole, and should vote accordingly.

AGREEMENT: All GRAC members approved the bylaws.

d. Review/Adopt Meeting Calendar & Work Plan

Ms. Gitelman reviewed the general calendar and work plan, which was designed to set initial direction for the GRAC. Research and information will be shared with GRAC over the next few meetings to create a better understanding of groundwater and additional data needed. The work plan will then be reviewed again in April and adjusted as needed. The work plan's purpose was adopted by the Board of Supervisors and, although the GRAC may need some flexibility, it will be important to remain within the direction provided by the Board of Supervisors.

To ensure complementary and not duplicative efforts, GRAC will have an annual joint meeting with the Watershed Information Center and Conservancy (WICC) Board of Napa County, which has a similar mission with respect to public outreach and education on watershed issues, including water and watershed resource monitoring and assessment. The WICC includes elected representatives from each of the cities in Napa County, other public agencies, and the public at large. The GRAC is also charged with providing an annual report to the Board of Supervisors. Special meetings may be called, recognizing that the County has limited staff resources. Ad hoc committees may also be formed to complete work between meetings.

DISCUSSION:

- **Meeting times:** A request was made to move meeting start times to 2:00 p.m.

AGREEMENT: All approved amendment of the bylaws to change the meeting start time to 2:00 p.m.

ACTION ITEM: Mr. Lowe will submit a request to the Board of Supervisors for approval to change the GRAC bylaws to reflect a new meeting start time of 2 pm.

- **December meeting date:** Two members inquired if the December 15th meeting date could be rescheduled. GRAC members discussed a series of possible alternative dates and settled on December 12. One member will be unable to attend that date. To help that member stay engaged, Mr. Fougères will discuss the meeting agenda in advance with this GRAC member and materials including agenda packet and post-meeting summary will be made available. This process will be provided for any other GRAC members who may find themselves unable to attend a future meeting.

  AGREEMENT: All agreed to have the December meeting scheduled for Monday, December 12th.

AGREEMENT: All GRAC members approved the calendar as revised and the work plan.

e. Review/Adopt Collaboration Guidelines

Mr. Fougères reviewed and discussed the collaboration guidelines, including general process, meeting ground rules, media protocol and joint fact finding protocol.

DISCUSSION

- **Representation:** The Chair asked GRAC members to share which constituencies they may represent. GRAC members have been invited to represent the public interest for Napa County. To the extent that members are part of organizations, members are encouraged to share information from GRAC meetings with associated consistencies. A meeting summary will be prepared after each GRAC meeting that may be used to inform communications and meeting materials will be made available to the public on the GRAC website www.countyofnapa.org/bos/grac.
- **Issue Bin:** It was suggested that an "issue bin" be made available to capture items that come up in discussion but outside the agenda. Such issues may be important to discuss at a later time.

  ACTION ITEM: Mr. Fougères agreed to make that process (issue bin) available.

- **Approving Minutes:** To expedite the process of approving meeting minutes, a request was made to obtain and read in advance of meetings. Staff confirmed that

meeting minutes will be provided a minimum of one week in advance of GRAC meetings. Minutes will also be included as a part of the public record.

- **Joint Fact-Finding Ad Hoc Subcommittees:** County Counsel indicated that if an ad hoc subcommittee sought to bring in outside subject matter experts, it would have to publicly notice its meetings. Alternately, these experts could be invited to a regular Committee meeting. See the Brown Act discussion below.

- **Budget:** One member inquired what budget would cover the need for additional expertise and consultants. Should the need fall under a category for which staff members have funds, it may fall under existing budgets. If not, a budget request may be submitted to the Board of Supervisors. However, in addition to technical expertise available through staff, a groundwater consultant is being secured for GRAC to assist with information needs.

  AGREEMENT: All agreed that the GRAC would discuss such needs at that time, should a need for additional expertise and information arise.

f. Presentation/Discussion of Brown Act

Ms. Killion provided a handout and brief presentation on the Brown Act. Members who may be eligible to receive reimbursements for expenses should attend a longer training (although it is not offered at this time).

The Brown Act (Government Code §§ 54950) can be found online. It provides information on how we set the agenda, provide meeting materials and invite the public to meetings. As an extension of the Board of Supervisors, GRAC must adhere with the Brown Act and County staff will help ensure compliance on behalf of GRAC. The purpose of the Brown Act is to allow the public into the deliberative process of public agencies and it applies to whenever you have a meeting about agency business. Also, the Brown and Public records Acts make documents open to the public with narrow exceptions.

Emails, phone chain, use of social networking and chat room sites such as Facebook fall under the category of serial meetings and are prohibited as the GRAC cannot congregate a quorum unless advance notice has been provided to the public within the required timeframe. The public must be invited to listen to and comment in the public process. A strictly social event where agency business is not discussed however does not fall under the Brown Act requirements.

Emails that members wish to forward to others should be sent to Mr. Lowe, and topics added to the agenda as necessary to ensure compliance with Brown Act. Emails should be written professionally as they are subject to public viewing.

Emergency meetings may be called for instances such as earthquakes, floods, etc.

The public has the right to attend and make public comment at the beginning of the agenda. GRAC may place a reasonable time limit on comments, which is typically three minutes. The chair can enable variances, however, Ms. Killion cautioned that variances should be limited and applied equally and evenly to all people. Important presentations may be set for the next agenda. The public may also comment on each section of GRAC agenda and the Chair will ask for public comment.

When voting members should vote on what they believe to be in the best interest of the county as a whole rather than one interest group. At this time, County Staff does not see any risk for conflict of interest in terms of economic benefit. However, if one believes there may be a conflict of this nature, they should speak with Mr. Lowe who will secure advice from Ms. Killion and explore the issue.

Ad Hoc subcommittees, if less than a majority of your committee, will not be bound by the Brown Act. However, once an external person, such as a technical expert, attends it becomes subject to the Brown Act. But, one member can talk with an expert and then have a report back to the GRAC on the agenda for full discussion. County staff members are able and invited to provide ad hoc subcommittees with information without triggering the Brown Act.

DISCUSSION:

- **Meeting Documents for public viewing:** A GRAC member highlighted documents distributed must be provided for public viewing a minimum of 72 hours in advance of a meeting. He inquired how documents developed after that requirement and before meetings would be handled. In such instances, the documents will be brought and provided to the public at the meeting and later posted to the website.

  Ms. Gitelman reiterated her request that anything GRAC members receive in advance of meetings, such as correspondence or emails related to your committee role, be forwarded to Mr. Lowe for staff preparation.

- **Announcements:** Another member inquired how to handle updates, such as when a GRAC member has met with constituents or presented information at other forums. Rather than emailing updates, it was encouraged that member use the agenda time for "Announcements" to provide such updates to GRAC members.

- **Requests for emails:** A question was posed as to how external or media requests for personal emails or GRAC related emails should be handled. In such cases, requestors should be directed to Mr. Lowe who will contact Ms. Killion to assist in reviewing the request. Agency related, but not personal emails, are subject to public view.

- **Ad Hoc committees with County residents:** The bylaws indicate that in cases of ad hoc committees, county residents are not considered external parties and not bound under the Brown Act. A request for confirmation was made of County Counsel.

  ACTION ITEM: Ms. Killion will explore whether the invitation of Napa County resident(s) would make an ad hoc committee subject to the Brown Act.

4. Public Comment

Mr. Lavern Mack lives in Coombsville and has been a county resident for roughly 64 years. He offered to share his experience and historical, well, and aquifer knowledge.

5. Break

6. Presentations and Discussion Items

a. County Policies Regarding Groundwater

Ms. Gitelman, Director of CDPD, provided a handout with excerpts from the 2008 General Plan. The document highlighted goals, policies and action items related to groundwater. Ms. Gitelman called attention to key items. The GRAC will focus almost entirely on policy issues, except in year two when the GRAC will review well pump-test standards and the groundwater ordinance.

Goals: Goals highlighted as related to GRAC included Con 10, Con 11 and Con 12. The GRAC charge will be based on CON-12 to collectively gather information and communicate the information.

Policy: Key policies that will be of GRAC's interest are CON-44 sub paragraph (d) to work with other agencies as well as CON-51, 52, 52.5, 53, 57, 59, and 63. These were all carefully negotiated in the General Plan process and should be used to guide GRAC.

Action Items: Items directly related to GRAC's charge included WR5, WR6, and WR-8.

DISCUSSION

- **Enforcement of Action Item CON WR-6:** It was questioned whether the County has started enforcing the requirement for discretionary projects to provide information upon request. The county has made the condition but has not yet enforced it. Residential permits are not asked to provide the information. However, the condition is in effect for requests for use permits, re-zoning, etc.

b. Stakeholder Assessment Findings

Mr. Fougères presented slides that provided an overview of work completed by the Center for Collaborative Policy, roughly 2 years ago. In interviews, members relayed complexities with Napa such as the geological diversity and concerns about trade-offs between urban, rural, residential and agriculture use, the tension between recognition of private property rights and collective rights to use the resource, and concern on the impact to aquatic and riparian areas. Interviewees also stressed the need for transparency, a clear process and inclusive design for providing recommendations on data gathering and monitoring. They also suggested using existing networks and involving the public in the process.

This and other findings and interviewee recommendations helped inform the inclusive design and process proposed for GRAC.

c. Napa County Groundwater Study Results – Part I

Vicki Kretsinger Grabert of Luhdorff & Scalmanini Consulting Engineers presented an overview of findings from the Napa County Groundwater Study. An executive summary of the study is found in the GRAC 10/27/2011 meeting packet and additional study information found on the CD and the GRAC website (www.countyofnapa.org/bos/grac).

Ms. Kretsinger Grabert highlighted several areas of the report in her presentation including:

- Data management system
- Data evaluation
- County model review
- Groundwater conditions
- Groundwater planning and review ordinance/permit process
- Recommendations

Additionally, challenges and limitations in analyzing the data were highlighted, such as changes with historical data points, variances in data available according to certain areas, and the need for information on head depth and location. Stemming from this study were several recommendations including the forming of a groundwater advisory committee, which is now the GRAC.

DISCUSSION:

- **Historical change in wells monitored:** Why the number of wells monitored over time had decreased was questioned. Ms. Kretsinger Grabert explained that the decrease in DWR funding and other cutbacks led to a reduction in monitoring. Certain studies such as the MST study collected data at one point in time. Moving forward, it will be critical to optimize the areas being studied.

- **Quantity and quality of Data:** In response to a question about the relative amount of wells and data available, Ms. Kretsinger Grabert replied that although there is a lot of data, one needs to know what that data represents for it to be meaningful, and to know whether it is meeting monitoring objectives. For example, the head depth is important. What is happening at the surface level may be different than what is happening at the deeper in the water table.

- **Study by Farrar and Metzger (2003)**: In response to query, Ms. Kretsinger Grabert replied that the document was accessible online.

- **Differing rates of groundwater decline:** It was questioned whether we now know why there may be greater groundwater decline in the north or south in MST given the amount of data collected. Ms. Kretsinger Grabert noted that differing rates are likely in part due to the location's geology and replenishing rates.

- **Data to understand recharge rates:** It was noted that there was a lack of data points in the eastern part of the county and hills and questioned whether data in these areas are needed to understand recharge rates for Napa's groundwater. Ms. Kretsinger Grabert commented that data points are scattered and often limited to areas prone more to agriculture and development. Further, Napa's geology is complex and cannot be looked at as a big bathtub. One can estimate groundwater recharge based on the hydrogeological information and recharge data, stream measurements, and a sense of what is occurring in one location versus another (e.g., agriculture). The direction of filtration in a streambed

compared with mountain recharge is also important. A great deal of information needs to be considered to make a more complete picture. As GRAC learns more about the data available and data needs, GRAC will need to identify data collection priorities. The GRAC's work will also include refining the county's hydrogeologic conceptualization of groundwater resources.

- **Water quality:** One member asked if the source of the water or other parameters were assessed. Ms. Kretsinger Grabert replied that the study compiled a lot of information, more than what regulated facilities would typically monitor. Some of the impact to water quality is natural. The county however may wish to monitor this, such as in regards to certain metals and environmental impact. This study did not look at the land use and nor at what may have contributed to water quality variances.

ACTION ITEM: GRAC members are encouraged to send questions or requests of basic information via email to Mr. Lowe by Monday, November 21. Answers and information will frame the December presentation (part 2) and discussion.

7. Other Business

a. CASGEM Update

A brief update on CASGEM was provided by Phil Miller, Deputy Director of Public Works. A more in-depth presentation will be provided at the December meeting. The State Legislature mandated groundwater monitoring. Napa has developed and submitted a county work plan to DWR, and is awaiting feedback. Currently there are 25 monitored wells in the plan, mostly in the NAPA basin and a few in surrounding areas. Well construction data is important and the county is planning outreach efforts to identify additional wells outside the valley floor.

DISCUSSION:

- **Confidentiality versus well location:** A question was raised how the county balanced the tradeoff between confidentiality and knowing the exact well location for data usefulness. Mr. Miller replied that DWR will make the CASGEM data available to the public, however, data points provided will not be identified with specific well locations. The State is sensitive to confidentiality and the risk of the misuse of information.

b. Groundwater Request for Proposal (RFP)/Consultant Selection Update

Mr. Lowe, Deputy Director of CDPD, provided a status update on the consultant selection process. The County sent out a request for proposals (RFP) to continue groundwater work. Six proposals were received and a review committee narrowed eligibility to three firms which have been invited to interview. Mr. Lowe asked for a GRAC volunteer to serve on the selection committee and attend the November 9th interviews from 9:00 a.m. to noon. David Graves volunteered for the role.

AGREEMENT: GRAC members agreed Mr. Graves should serve as the GRAC representative on the selection committee.

ACTION ITEM: Mr. Lowe will provide Mr. Graves with information on consultants by Wednesday, November 2.

8. Announcements

No Announcements for this meeting.

9. Future Agenda Items

The December meeting will cover information on CASGEM, more on groundwater studies and a draft plan for public outreach and education.

DISCUSSION

- **Posting of presentation materials:** Presentations and handouts will be posted on the GRAC website within a few days following the meeting. When possible, they will be posted concurrently with the meeting agenda packet.

10. Adjournment

The meeting was adjourned until Monday, December 12 at 2:00 p.m. in the Agricultural Commissioner's Office/UCCE Conference Room at 1710 Soscol Avenue.

Attendees

Groundwater Advisory Committee Members:

1. Michelle Benvenuto
2. Franklin Tucker Catlin
3. Alan Galbraith
4. Donald Gleason
5. David Graves
6. Michael Haley
7. Peter McCrea
8. Charles Slutzkin
9. Steve Soper
10. Marilee Talley
11. William Trautman
12. Susanne von Rosenberg
13. James Frederick Verhey

14. Duane Wall
15. Dale Withers

Public Attendees:

16. Lavern Mack (by telephone)

County Staff Members and Consultant Attendees:

17. Taralyn Atkins-Brown
18. John Coolidge
19. Dorian Fougères
20. Barbara Fultz
21. Hillary Gitelman
22. Janice Killion
23. Vicki Kretsinger Grabert
24. Steve Lederer
25. Daisy Lee
26. Patrick Lowe
27. Phil Miller
28. Greg Morgan
29. Don Ridenhour
30. Jeff Sharp
31. Rick Thomasser
32. Christine Secheli

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RESOLUTION NO.

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF NAPA, STATE OF CALIFORNIA, AMENDING THE BYLAWS OF THE GROUNDWATER RESOURCES ADVISORY COMMITTEE

WHEREAS, the Board of Supervisors created the Groundwater Resources Advisory Committee (GRAC) on June 28, 2011, and adopted bylaws under which it would operate, and

WHEREAS, at the first GRAC meeting held on October 27, 2011, the Committee voted to change its meeting time from 3:00 p.m. to 2:00 p.m., and

WHEREAS, staff suggested revisions and clarification to provisions relating to creation and use of ad hoc committees, and

WHEREAS, the GRAC seeks to adopt the proposed amended bylaws attached as Exhibit "A" which the Board desires to approve, and

WHEREAS, pursuant to Napa County Policy Manual Part 1 Section 8, the rules and regulations of a committee's conduct of business must be adopted by the Board of Supervisors.

NOW, THEREFORE BE IT RESOLVED that the Board of Supervisors of the County of Napa hereby finds as follows:

1. The Board hereby finds the foregoing recitals to be true and correct;

2. The proposed amended bylaws of the GRAC, attached as Exhibit "A", are hereby approved.

/ / /

/ / /

THE FOREGOING RESOLUTION WAS DULY AND REGULARLY ADOPTED by the Board of Supervisors of the County of Napa, State of California, at a regular meeting of the Board held on the day of , 2011, by the following vote:

AYES: SUPERVISORS

NOES: SUPERVISORS

ABSENT: SUPERVISORS

_____
BILL DODD, Chairman
Napa County Board of Supervisors

ATTEST: GLADYS I. COIL
Clerk of the Board of Supervisors

Date:

APPROVED AS TO FORM
Office of County Counsel

By: *Janice D. Killion* (by e-signature)
Date: November 7, 2011

APPROVED BY THE NAPA COUNTY BOARD OF SUPERVISORS

Date:

Processed by:

_____
Deputy Clerk of the Board

EXHIBIT "A"
BYLAWS OF THE NAPA COUNTY
GROUNDWATER RESOURCES ADVISORY COMMITTEE

I. OFFICERS. The officers of the Napa County Groundwater Resources Advisory Committee (the "GRAC") shall be the Chair, Vice-Chair and Secretary, chosen as follows:

A. Time of Election. At the first organizational meeting, the members of the GRAC shall elect the Chair and Vice-Chair from among their members. For purposes of these Bylaws, the terms "Chair" and "Vice-Chair" shall have the same meaning as, and may be used interchangeably with, the terms "Chairman" and "Chairperson," and the terms "Vice-Chairman" and "Vice-Chairperson." The Secretary shall be an employee or consultant of the County of Napa designated from time to time by the Napa County Director of Conservation, Development and Planning to perform the functions of Secretary described in these Bylaws.

B. Term. The Chair and Vice-Chair nominated and elected at the initial meeting of the GRAC shall begin their terms of office immediately upon election. Thereafter, the officers shall be nominated and elected in February of each year, beginning with 2013 and shall serve until their successors are elected and assume office. If the office of Chair becomes vacant during the term, the Vice-Chair shall become Chair. Vacancy in the office of Vice-Chair during the term shall be filled by election to serve the remainder of the term.

C. Duties of the Chair and Vice-Chair. The Chair, or the Vice Chair in the absence of the Chair, shall act as the presiding officer of the GRAC and in that capacity shall preserve order and decorum, decide questions of order subject to being overruled by a two-thirds vote and perform such other duties as are required by these Bylaws, the resolution(s) of the Napa County Board of Supervisors creating and/or modifying the composition and charge of the GRAC, or by vote of the GRAC. The Chair shall have all the rights and duties enjoyed by any other member of the GRAC, including the right to make and second motions.

II. MEETINGS

A. Date and Location of Regular GRAC Meetings. Regular meetings of the GRAC shall be on the fourth Thursday of every other month beginning in February of each year, except for December, when the meeting shall be held on the second Thursday, as shown on a calendar and at a location which the GRAC shall adopt at their first meeting of each calendar year. Notwithstanding the foregoing, any regularly scheduled meeting of the GRAC may be canceled by majority vote of the GRAC or, for lack of business or a quorum, by the Chair or Secretary.

B. **Time of Regular GRAC Meetings.** Regular meetings of the GRAC shall commence at 2:00 p.m. and continue until all agendized business is concluded unless adjourned earlier on motion of the GRAC for any reason or by the Chair or Secretary for lack of a quorum or unavailability of a meeting location due to an emergency.

C. **Emergency GRAC Meetings.** Emergency meetings of the GRAC shall be called in conformance with the provisions of the Brown Act (Government Code Section 54950 and following).

D. **Special GRAC Meetings.** Special meetings of the GRAC shall be called in conformance with the provisions of the Brown Act, including 24 hour notice of the meeting posted at the regular meeting location, and in those local newspapers who have requested to be informed of GRAC meetings.

E. **Agendas.** The Secretary shall prepare, post, and otherwise give notice of the agenda for each meeting of the GRAC in accordance with the requirements of the Brown Act. No matter may be considered or acted upon unless it is included on the posted agenda or a supplemental agenda. If not so included, questions or comments regarding the item shall be limited to the scope permitted for "public comment" under the Brown Act. Supplemental agendas will be prepared and considered by the GRAC only under the following conditions:

1. **Emergencies.** Upon a determination by the GRAC that an emergency situation exists, as defined in Section 54956.5 of the Government Code.

2. **Recently Continued Item.** The item was properly posted for a prior meeting of the GRAC occurring not more than five calendar days prior to the date action is taken on the item, and at the prior meeting the item was continued to the meeting at which action is being taken.

III. CONDUCT OF MEETINGS

A. **Order of Business.** The regular order of business of the GRAC shall be:

1. Call to order.

2. Approval of the minutes of the previous meeting.

3. Public comment on unagendized items.

4. Consideration and action on Agenda Items.

5. Adjournment.

In the event public comments exceed 10 minutes the Chair may continue public comment on unagendized items to the end of the meeting if desired.

B. **Parliamentary Procedure.** Unless otherwise provided by these Bylaws or required by law, all proceedings before the GRAC shall be conducted in accordance with and pursuant to the parliamentary procedure prescribed in "Sturgis Standard Code of Parliamentary Procedure, 4th edition" or the most current published and available edition of such work.

C. **Recording of Meetings.** Any meeting of the GRAC, other than a closed session permitted under the Brown Act, may be recorded by any person, unless the GRAC determines that such recording could constitute a disruption of the proceedings.

D. **Presentations to the GRAC.** Any person desiring to address the GRAC shall be requested, when recognized by the Chair, to give his or her name and address to facilitate preparation of the minutes, although no persons shall be denied recognition or denied the opportunity to speak solely because they decline to state their names and addresses. The Chair may, in the interest of facilitating the business of the GRAC, set in advance of the presentation of public input reasonable time limits for oral presentations. Persons may submit written comments in lieu of oral comments if the Chair determines that a reasonable opportunity for oral presentations has been provided, and in such a case, the matter may be continued to a later date to allow a reasonable time for such submittals to occur.

E. **Recordation of GRAC Actions.** All official actions or decisions by the GRAC shall be entered in the minutes of the GRAC kept by the Secretary. The vote tally on every question shall be recorded, except where a roll call vote is used, the votes of each member of the GRAC shall be recorded. Only written action minutes will be maintained, however, electronic recordings may be made by the Secretary of each meeting of the GRAC which shall be available to the public for inspection by request made at the Napa County Conservation, Development and Planning Department, 1195 Third Street, Suite 210, Napa, California 94559.

IV. VOTING AND QUORUM

A. **Roll Call Vote.** A roll call vote may be required for voting upon any motion of the GRAC, at the discretion of the Chair.

B. **Inaudible Votes.** Any member present who does not vote in an audible voice shall be recorded as voting "aye". A member may abstain from voting only if the member has recused himself or herself from participating due to a conflict of interest under Government Code section 87100 and

following, in which case the member shall not be present in the meeting room during the discussion and action on the item.

C. **Quorum.** A quorum for the transaction of business shall exist only as long as a majority of the GRAC members are present. For purposes of this Bylaw, "majority of the members" means a majority (8) of the authorized positions, whether or not all of the positions have been filled by the Board of Supervisors.

D. **Number of Votes Required for Action.** No action or recommendation of the GRAC shall be valid and binding unless a quorum is present and the action is approved. Whenever possible the GRAC shall seek consensus. If matters arise that cannot be resolved by consensus, action or recommendation shall be obtained by a two-thirds vote of the GRAC members actually present at the meeting. Each member shall have one vote. No votes may be cast by proxy. Tie votes shall be considered as denial of the motion.

E. **Voting Affected by Conflict of Interest.** As a general rule, no member shall participate as a member in any discussion or voting if to do so would constitute a conflict of interest. However, if a quorum cannot be achieved or the required number of affirmative votes for action obtained because conflicts of interest exist that prevent members having such conflicts from discussing or voting on the matter, and the conflicts are such that an insufficient number of non-conflicted members will be available to vote at a later date even if the matter is continued, then the matter shall not be continued and a sufficient number of members having conflicts of interest, selected by lot, shall be allowed to participate to provide enough votes for the GRAC to form a quorum and take affirmative action.

F. **Motion to Reconsider.** The GRAC may reconsider a matter during the meeting at which the vote was taken, provided all members who were present when the matter was discussed and voted upon are still present and provided further that the motion to reconsider is made by a member who voted with the prevailing side. A motion for reconsideration shall have precedence over every motion except a motion to adjourn. A final vote on any matter may also be placed on the agenda for reconsideration by the GRAC upon motion of any member at any later meeting. When the GRAC approves a motion for reconsideration, the GRAC may, in its discretion, reconsider the matter immediately or at a later date.

V. SUBCOMMITTEES.

Ad Hoc Subcommittees. The GRAC may authorize the creation of ad hoc subcommittees from time to time to investigate, observe, review, or otherwise study and report back their observations and conclusions to the full GRAC for possible further action. When creating such ad hoc committees, the GRAC shall specify the subject to be investigated and time to report, and shall appoint those

GRAC members who will serve on the ad hoc subcommittee. The number of GRAC members appointed to any particular ad hoc committee shall be less than the number of members required to constitute a quorum of the full GRAC. Upon presentation of its final report to the full GRAC, each such ad hoc subcommittee shall cease to exist. Ad hoc subcommittees created pursuant to this subsection shall not be subject to the Brown Act.

VI. CHANGES TO BYLAWS

The provisions of these Bylaws may be altered, amended, or repealed by the GRAC at any time, within limitations imposed by the Brown Act and by resolution of the Napa County Board of Supervisors.

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A Tradition of Stewardship
A Commitment to Service

Napa County
Groundwater Resources Advisory Committee

2012 Meeting Calendar

Members:
Michelle Benvenuto
Tucker Catlin
Alan Galbraith
Donald Gleason
David Graves
Michael Haley
Peter McCrea
Charles Slutzkin
Steve Soper
Marilee Talley
William Trautman
James Verhey
Susanne von Rosenberg
Duane Wall
Dale Withers

Staff:
Patrick Lowe,
Deputy Director
Conservation, Devel. &
Planning Dept.

Phillip Miller,
Deputy Director
Public Works Dept.

Janice Killion,
Legal Counsel
County Counsel's Office

Meeting Details

Time:
2:00 PM

Location:
Ag. Commissioner's Office
UCCE Conference Room
1710 Soscol Ave., Napa CA

Pubic attendance is welcome

NOTE: Meeting time and location may change as directed by the Committee

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- Regular Meeting Dates

http://www.countyofnapa.org/bos/grac/

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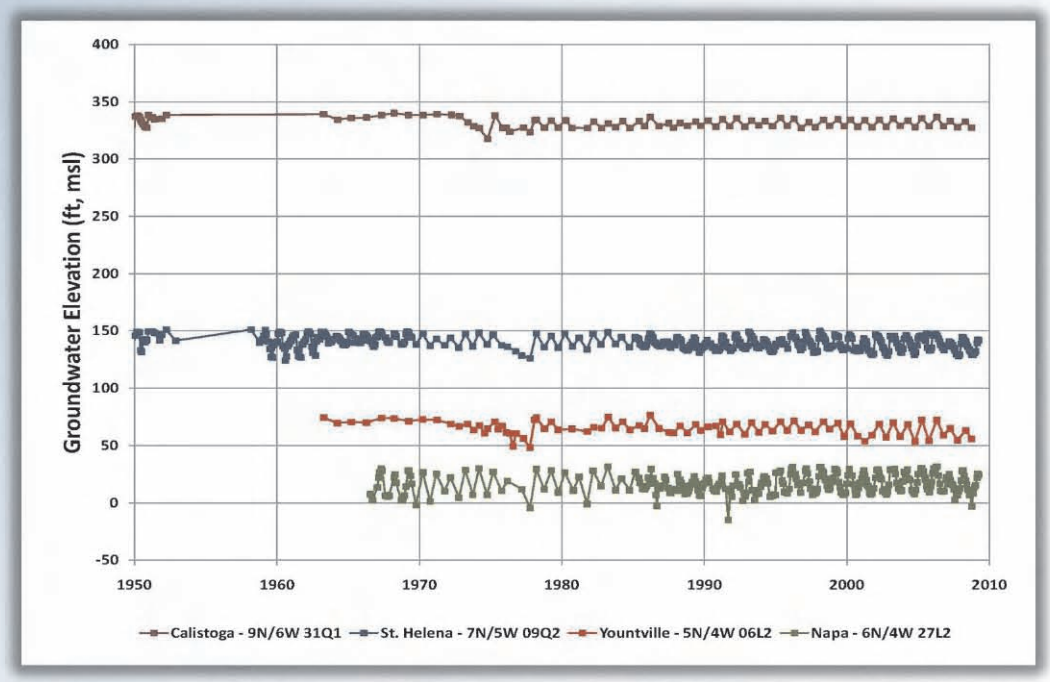
Napa County
California Statewide Groundwater Elevation Monitoring (CASGEM) Network Plan

September, 2011



LUHDORFF & SCALMANINI
CONSULTING ENGINEERS

Napa County

California Statewide Groundwater Elevation Monitoring (CASGEM) Network Plan

September 2011

LUHDORFF & SCALMANINI
CONSULTING ENGINEERS

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Figure 1 Napa County Groundwater Basins
Figure 2 Napa County Subareas
Figure 3 Well Location Map for CASGEM Program, Napa County, CA

1.0 INTRODUCTION

1.1 CASGEM Goal

In November 2009, Senate Bill SBX7-6 mandated that the groundwater elevations in all basins and subbasins in California be regularly and systematically monitored with the goal of demonstrating seasonal and long-term trends in groundwater elevations. In accordance with the mandate, the California Department of Water Resources (DWR) developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program. DWR is facilitating the statewide program which began with the opportunity for local entities to apply to DWR to assume the function of regularly and systematically collecting and reporting groundwater level data for the above purpose. These entities are referred to as Monitoring Entities. The legislature added a key aspect to SBX7 – 6 which was to make certain elements of the groundwater level information available to the public.

1.2 CASGEM Program Complements Other Monitoring Programs

Wells designated for inclusion in the CASGEM program are for purposes of measuring groundwater levels on a semi-annual or more frequent basis that are representative of groundwater conditions in the state's groundwater basins and subbasins. The wells selected by a designated Monitoring Entity may be a subset of other wells monitored by that entity and need not be inclusive of the designated entity's entire monitoring network. Thus, the CASGEM program complements other pre-existing programs that have been developed throughout California by water districts, agencies, municipalities, counties, and others for purposes of understanding, managing, and sustaining groundwater resources.

In 2009, Napa County implemented a Comprehensive Groundwater Monitoring Program to meet identified action items in Napa County's 2008 General Plan update (Napa County, 2008). This program covers the continuation and expansion of countywide groundwater level monitoring efforts (including many basins, subbasins and/or subareas throughout the county) for the purpose of understanding groundwater conditions (i.e., seasonal and long-term groundwater level trends and also quality trends) and availability to enable integrated water resources planning and dissemination of water resources information. Napa County's combined efforts through the Comprehensive Groundwater Monitoring Program along with the related AB 303 Public Outreach Project (CCP, 2010) and the efforts of the Watershed Information Center & Conservancy (WICC) of Napa County create a foundation for the County's continued efforts to increase public outreach and participation. An informed and engaged public enables support of planned water resources projects and programs proposed by the County and others.

1.3 Napa County Monitoring Entity

On December 29, 2010, the County of Napa applied to DWR to become the countywide Monitoring Entity which would designate wells as appropriate for monitoring and reporting groundwater elevations for purposes of the CASGEM program. Following confirmation of DWR's acceptance of the County as the Monitoring Entity, the County proceeded to identify the wells to be included in the monitoring program network and to prepare this CASGEM Network Plan (Plan) as required by DWR.

This Plan contains the recommended components outlined by DWR, including a summary of the geology and groundwater resources in Napa County. This Plan also identifies the planned CASGEM well network, the rationale for the selection of the wells, the field methods, and the monitoring schedule.

1.4 County Outreach

In August 2011, the County sent a letter to other entities in the county informing them of the County's role as the CASGEM Monitoring Entity, efforts underway to prepare a CASGEM Plan, and planned groundwater elevation data submittal by the January 2012 deadline. The County explained the process underway to evaluate the suitability of the wells that have historically been monitored by the County for inclusion in the CASGEM program/plan. The County also explained to other entities that it is seeking property owner interest and participation in the CASGEM program from those owners whose wells may be suitable and have historically been monitored by the County.

2.0 NAPA COUNTY AREA

2.1 DWR Basins/Subbasins and County Subareas

The CASGEM program largely refers to DWR's depiction of the major groundwater basins and subbasins in and around Napa County, including the Napa-Sonoma Valley (which in Napa County includes the Napa Valley and Napa-Sonoma Lowlands Subbasins), Berryessa Valley, Pope Valley, and a small part of the Suisun-Fairfield Valley Groundwater Basins (**Figure 1**). These basins and subbasins are generally defined based on boundaries to groundwater flow and the presence of water-bearing geologic units. The groundwater basins defined by DWR are not confined within county boundaries, and DWR-designated "basin" or "subbasin" designations do not cover all of Napa County.

Groundwater conditions outside of the DWR-designated areas are also very important in Napa County. An example of such an area is the Milliken-Sarco-Tulucay (MST) area, a locally identified groundwater deficient area. For purposes of the County's CASGEM Plan, and prior groundwater studies, the county has been subdivided into a series of subareas (**Figure 2**). These subareas were delineated based on the main watersheds, groundwater basins, and the County's planning areas. These include the Knoxville, Livermore Ranch, Pope Valley, Berryessa, Angwin, Central Interior Valleys, Eastern Mountains, Southern Interior Valleys, Jameson/American Canyon, Napa River Marshes, Carneros, and Western Mountains Subareas and five Napa Valley Floor Subareas (i.e., Calistoga, St. Helena, Yountville, Napa, and MST).

2.2 Geology and Groundwater Resources

The geology of Napa County can be divided into three broad geologic units based on their ages and geologic nature. These units are: 1) Mesozoic Basement Rocks (pre-65 million years (my)), which underlie all of Napa County, but they are primarily exposed in the Eastern County area and the Western Mountains Subarea, 2) Older Cenozoic Volcanic and Sedimentary Deposits (65 my to 2.5 my), including Tertiary Sonoma Volcanics (Miocene and Pliocene; 10 my to 2.5 my) which are found throughout the county, especially in the mountains surrounding Napa Valley,

and 3) Younger Cenozoic Volcanic and Sedimentary Deposits (post 2.6 my to present), including the Quaternary alluvium of the Valley Floor. The two primary water-bearing units in the county are the tuffaceous member of the Sonoma Volcanics and the Quaternary alluvium.

Outside of the Napa Valley Floor, percolation of surface water appears to be the primary source of recharge. The rate of recharge within areas such as the MST Subarea has been shown to be significantly higher where streams and tributaries cross highly permeable outcrops (e.g., the tuffaceous member of the Sonoma Volcanics or shallow alluvium). Direct infiltration of precipitation is a major component of recharge in the main Napa Valley. Recharge throughout much of the county is generally limited by underlying shallow bedrock of low permeability. An additional component of groundwater recharge is deep percolation through fractured rock and fault zones. This type of recharge can be very difficult to quantify due to the highly variable size and distribution of faults, fractures, and joints in a given area.

3.0 PREVIOUS GROUNDWATER STUDIES

3.1 Napa County's Comprehensive Groundwater Monitoring Program

Napa County's Comprehensive Groundwater Monitoring Program involved many tasks that led to the preparation of five technical memorandums and a report on *Napa County Groundwater Conditions and Groundwater Monitoring Recommendations* (LSCE, 2011). This report and the other related documents can be found at: http://www.countyofnapa.org/planning/groundwater/ The report documents existing knowledge of countywide groundwater conditions and establishes a framework for the monitoring and reporting of groundwater levels and groundwater quality on a periodic basis.

3.2 Current Countywide Groundwater Level Monitoring

As part of the County's Comprehensive Groundwater Monitoring Program, groundwater level data were examined and groundwater data gaps identified by county subareas (LSCE, 2011). Historical groundwater level measurements have been recorded at a total of 676 wells (173 wells/sites) through at least 2005. Subsequently, most wells have continued to be monitored. Of the sites measured, some type of well construction information (depth and/or perforated interval(s)) is readily available for 118 locations.
There are many areas in the county where further efforts to establish groundwater monitoring, using existing or new monitoring facilities, will improve the understanding of groundwater conditions and availability. Primary objectives for addressing groundwater level monitoring include:

- Evaluate groundwater levels in the various county subareas to describe the occurrence and movement of groundwater and identify vertical hydraulic head differences in the aquifer system;
- Detect the occurrence of, and factors attributable to, natural (e.g., direct infiltration of precipitation, surface water seepage to groundwater, groundwater discharge to streams) or induced (e.g., pumping, purposeful recharge operations) factors that affect groundwater conditions and trends;
- Identify where data gaps occur and provide infill, replacement, and/or project-specific monitoring (e.g., such as may occur for planned projects or expansion of existing

projects) as needed;
- Develop and/or refine water budgets for key subareas, including recharge, extraction, and change in storage in the aquifer(s); and
- Employ methods to better estimate groundwater basin conditions, assess local current and future water supply availability and reliability, and update analyses as additional data become available.

Napa County has been monitoring and reporting groundwater level measurements to DWR for many years. Reported wells are primarily located in the five subareas of the Napa Valley Floor (i.e., Calistoga, MST, Napa, St. Helena, and Yountville Subareas). A total of 39 wells are recurrently measured by the County semi-annually in the spring and fall. Of those 39 wells, level measurements in 26 wells are reported to DWR for inclusion in DWR's Water Data Library, and the remaining 13 wells are measured for County information.

3.3 Current Groundwater Conditions

Groundwater level data are primarily available for the subareas in the Napa Valley Floor. Most of these data are not able to be correlated to specific aquifer units due to a lack of associated well construction and lithologic log information. As a result, evaluation of groundwater levels and conditions specific to individual aquifer zones is limited at this time.

Based on available groundwater level data, levels in the county are generally stable, with the exception of the MST Subarea. Groundwater in the Napa Valley Floor generally flows toward the axis of the valley and south when not influenced by local pumping depressions. The MST Subarea, however, has shown significant declines in groundwater levels, especially in the central portion of the subarea. Contemporaneous changes in water level trends are possible to discern throughout the MST. The variation and timing of groundwater level declines and trends in the north, central, and southern areas of the MST that have historically occurred may be attributable to increased pumping and/or variations in geologic conditions. Wells in the immediate vicinity of the MST Subarea may also be vulnerable to these variations as seen from limited data in the eastern portion of the Napa Valley Floor-Napa (NVF-Napa) Subarea and the southwestern part of the Eastern Mountains Subarea. Most wells elsewhere in the Napa Valley Floor with a sufficient record indicate that groundwater levels are more affected by climatic conditions, are within historic levels, and seem to recover from dry periods during subsequent wet or normal periods.

Groundwater level conditions outside of the Napa Valley Floor are much less known. Lithology, terrain, and monitoring well distribution in areas outside of the Napa Valley Floor combine to make it difficult to characterize groundwater resources in other subareas of the county. Subareas south of the Valley have very limited water level data, making it difficult to impossible to assess any potential for historic or current saltwater intrusion from San Pablo Bay. Subareas east and west of the Valley Floor have limited data or are lacking groundwater level data entirely (as seen in Livermore Ranch, Southern Interior Valleys, and Western Mountains Subareas). Where data are available, most records are short, spanning a few years at most. Though the data are limited and spatially distributed, it appears that groundwater level conditions in these areas are stable. Additional details on historical monitoring, groundwater data availability, the occurrence of groundwater, and groundwater level trends is reported in *Napa County Groundwater Conditions*

and Groundwater Monitoring Recommendations (LSCE, 2011) (http://www.countyofnapa.org/planning/groundwater/).

4.0 CASGEM MONITORING NETWORK AND PROGRAM – 2011

4.1 DWR Basins/Subbasins and County Subareas for CASGEM Program

While the focus of DWR's CASGEM program is largely on DWR-designated groundwater basins and subbasins, groundwater conditions outside of these DWR-designated areas are also very important in Napa County. As indicated above, one such example in Napa County is the NVF-MST Subarea. As the County's Comprehensive Groundwater Monitoring Program and also the CASGEM program evolve, the County will seek resources and property owner consent to have representative groundwater monitoring in all the DWR-designated basins and subbasins and most if not all county subareas.

4.2 Napa County Public Outreach

As indicated above, Napa County has been conducting groundwater monitoring for many years. Because the CASGEM program includes public disclosure of information in addition to measured water levels, the County conducted public outreach to property owners about their interest in participating in the CASGEM program. In late July 2011, the County sent outreach letters to 25 property owners whose wells have been historically monitored by the County. Subsequently, in August 2011, the County sent reminder letters to those owners who had not responded to the County's inquiry about their interest in participating in the program. The County also telephoned property owners, when numbers were available. Additional letters of inquiry about CASGEM participation were also sent by the County in August 2011 to 6 property owners whose wells have been monitored by DWR for either water quality, water levels, or both. As of the end of August, the County received responses from thirteen owners (for a total of 14 wells) interested in participating and 4 owners not interested in participating in the CASGEM program. Monitoring of all wells previously monitored by the County will continue as before; however, only groundwater level data collected from these fourteen wells will be reported to DWR through the CASGEM online submittal system. However, it should be noted that one of the 14 wells has been historically monitored by DWR only for water quality. The monitoring of this well will be coordinated with DWR such that water quality and water elevation will be conducted concurrently. The remainder of the wells that are not part of the CASGEM program will continue to be monitored by the County and reported to DWR for the Water Data Library.

4.3 Selected CASGEM Wells

The County anticipates that, in the future, a minimum of one groundwater monitoring well in each of the basins/subbasins will be measured and reported as part of the CASGEM program. As described below, further public outreach and evaluation of wells suitable for the County's Comprehensive Groundwater Monitoring Program and the CASGEM program is being conducted. The County plans to expand its countywide groundwater monitoring program, including the CASGEM well network as public awareness expands and resources become available. The CASGEM well network for 2011 is described in detail below along with other future efforts to expand the countywide monitoring program.

2011 Napa County CASGEM Program

During the initial CASGEM year (i.e., 2011), the County is planning to continue to monitor fourteen wells that have already been part of the group of wells where groundwater levels are measured by the County and reported to DWR semi-annually, or are measured directly by DWR (**Table 1**). As shown on **Figure 3**, the CASGEM wells are located primarily on the Napa Valley Floor and in the MST Subarea. Some of these wells do not have sufficient construction details to define which portion of the aquifer system is represented by measured water levels (**Table 1**). Additional data gathering and surveying will be performed, and such information will be provided in future annual reports as it becomes available. Depending on the results of the County's evaluation, future actions may include removal and replacement of CASGEM wells with wells that are more representative of local groundwater conditions to better meet the objective of the CASGEM program and also overall objectives of the County's Comprehensive Groundwater Monitoring Program. The current 2011 Napa County CASGEM network meets the objectives for:

- Providing representative of groundwater conditions in Napa County groundwater basins, subbasins, and or county subareas; and
- Providing systematic groundwater elevations for purposes of demonstrating seasonal and long-term trends.

Well information such as required and/or suggested by DWR for the CASGEM program wells, along with additional information, is summarized in detail in **Appendix A.**

Table 1
Napa County 2011 CASGEM Network

Napa County Subarea	DWR GW Basin Number[1]	State Well Number (County Well ID)	Msmt Frequency	Well Use	Well Depth (feet)	Screened Interval (feet)	Aquifer Designation
NVF-MST	--	5N/3W-06B2 (91)	SA	Dom	415	315-415	SV
NVF-MST	--	5N/3W-06A1 (92)	SA	Dom	368	Unk	Qal/SV?
NVF-MST	--	5N/3W-06M1 (74)	SA	Dom	300	Unk	Qal/SV?
NVF-MST	--	5N/4W-13H1 (137)	SA	Irr	364	Unk	Qal/SV?
NVF-Napa	2-2.01	5N/4W-14J3 (49)	SA	Unus	399	Unk	Qal/SV
NVF-Napa	2-2.01	6N/4W-27N1 (136)	SA	Dom/Irr	120	Unk	Qal?
NVF-Yountville	2-2.01	6N/4W-06L2 (134)	SA	Irr	260	160-260	Qal
NVF-Yountville	2-2.01	6N/4W-09Q1 (125)	SA	Dom	160	63-160	SV?
NVF-Yountville	2-2.01	6N/4W-09Q2 (126)	SA	Dom/Irr	345	140-345	SV?
NVF-St. Helena	2-2.01	7N/5W-14B2 (132)	SA	Irr	265	25-265	Qal/SV
NVF-St. Helena	2-2.01	7N/5W-16L1 (131)	SA	Dom	221	7 lengths	Qal
NVF-St. Helena	2-2.01	7N/5W-16N2 (138)	SA	Dom/Irr	321	Unk	Qal/SV?
NVF-Calistoga	2-2.01	9N/6W-31Q1 (128)	SA	Unus	50	Unk	Qal
Carneros	2-2.03	4N/4W-05C1 (150)	SA	Unk	155	unk	Qal?

[1]DWR Groundwater Basin Number: 2-2.01 (Napa-Sonoma Valley GW Basin, Napa Valley Subbasin), 2-2.03 (Napa-Sonoma Valley GW Basin, Napa-Sonoma Lowlands Subbasin)

Definitions: SA (Semi-annual); Dom (Domestic); Irr (Irrigation); Unus (Unused); Unk (Unknown); Qal (Quaternary Alluvium); SV (Sonoma Volcanics)

4.4 Field Methods

Napa County has documented field procedures for the collection of groundwater level measurements which were updated as part of the County's Comprehensive Groundwater Monitoring Program (**Appendix B**; LSCE, 2010a). An example form for recording water level measurements is also included here. The County will use these procedures for the CASGEM program as well as continued monitoring of wells where water level data are submitted to DWR semi-annually for inclusion in DWR's Water Data Library, and the monitoring of other wells measured for County information.

4.5 Monitoring Schedule

Historically, the County has measured the newly designated CASGEM wells (**Table 1**) semi-annually in the spring (April) and fall (October) of each year. Historical hydrographs show that these measurement periods generally correspond to the seasonal high and low groundwater elevations observed in their respective county subareas. The County will continue to measure the CASGEM wells semi-annually during similar periods.

4.6 Groundwater Elevation Data Management and CASGEM Data Submittal

As part of the Comprehensive Groundwater Monitoring Program, a Data Management System (DMS) was developed for the County to establish a centralized repository for recording and archiving countywide well construction data (as related to groundwater monitored wells), historical groundwater level and quality measurements, and developing procedures for analyzing data on a programmatic basis. Groundwater data collected by the County (including data collected as part of the CASGEM program and other County programs) will be input into the DMS in a systematic way through a centralized person or department to ensure data accuracy and consistency. It is expected that there will be regular updates from internal County sources and external agencies of new data for new and existing wells/sites already in the DMS. Consistent quality control of the data and data entry are described in the documentation for the DMS (LSCE, 2010b).

Per DWR's CASGEM program reporting requirements, the following information related to each of the designated wells monitored will be submitted online at the end of each calendar year:

- Well identification number (DWR state well number in online format)
- Measurement dates
- Reference point elevation of the well (feet) using NAVD88 vertical datum
- Elevation of land surface datum at the well (feet) using NAVD88 vertical datum
- Depth to water below reference point (feet) (unless no measurement was taken)
- Method of measuring water depth
- Measurement quality codes[1]
- Measuring agency identification (Napa County as the Monitoring Entity)

[1] Measurement quality codes examples include: 1) If no measurement is taken, a specified "no measurement" code, must be recorded. 2) If the quality of a measurement is uncertain, a "questionable measurement" code can be recorded. Standard codes will be provided by DWR's online system.

- Measurement time (PST/PDT with military time/24 hour format)
- Comments about measurement, if applicable

5.0 CASGEM MONITORING NETWORK – 2012 AND BEYOND

Although the 2011 CASGEM well network is described herein, the County is planning to include at least one additional monitoring well in the Pope Valley and Berryessa Valley Groundwater Basins as well as additional wells (i.e., in addition to those identified for the 2011 CASGEM program) in seven subareas (including the NVF-Calistoga, NVF-MST, NVF-Napa, NVF-St. Helena, NVF-Yountville, Carneros, and Pope Valley Subareas) over the coming years. As part of the County's Comprehensive Groundwater Monitoring Program, these subareas are given a higher priority based on factors of current and/or projected land and water use. Additional wells in these subareas are of interest for (LSCE, 2011):

- Improving horizontal and/or vertical spatial distribution of data;
- Identifying appropriate monitoring sites to evaluate surface water-groundwater recharge/discharge mechanisms; and
- Establishing additional basic data needed to accomplish groundwater level monitoring objectives as described above in **Section 3.2**.

Further examination of the suitability of existing wells for groundwater monitoring (including their location and construction and relevance to meet County and/or CASGEM monitoring objectives) is necessary to determine if any existing wells would be suitable for ongoing evaluation of groundwater conditions. If existing private wells are considered, approval from the property owners to participate in the CASGEM program would be sought. Additional wells may be added to provide better spatial and/or vertical distribution of monitored locations within the subareas and to enhance the understanding of localized groundwater conditions and availability.

On June 28, 2011, the County Board of Supervisors adopted a resolution establishing a Groundwater Resources Advisory Committee (GRAC). Two of the tasks assigned to the GRAC include: 1) assisting with the synthesis of the existing groundwater information and identifying critical data needs; and 2) providing input on the furtherance of the ongoing countywide groundwater monitoring program. It is anticipated that input from this committee will be coordinated to optimize additional groundwater monitoring locations that serve to meet the objectives of the County's Comprehensive Groundwater Monitoring Program and the CASGEM monitoring program.

The first meeting of the GRAC is scheduled for October 2011. The County will conduct additional public outreach to inform more private well owners of the value of understanding the groundwater resources in the County and to encourage their participation in the Comprehensive Groundwater Monitoring Program and/or CASGEM program. The County anticipates additional wells to be included in the CASGEM program over the coming years. Wells will be included based upon input from the County's GRAC and in concert with their work to meet the objectives of the County's Comprehensive Groundwater Monitoring Program and the CASGEM program.

5.1 Reporting

The County, in coordination with the GRAC's activities, intends to prepare an annual report summarizing the results and findings of the current CASGEM program. Each annual report will describe any changes to the current monitoring network and program, including recommended additions to the CASGEM program network to meet the County's stated objectives for its Comprehensive Groundwater Monitoring Program.

6.0 References

Center for Collaborative Policy at California State University Sacramento. 2010. Assessment of the feasibility of a collaborative groundwater data gathering effort in Napa County, California.

Luhdorff & Scalmanini, Consulting Engineers (LSCE). 2010a. Task 2, Review and evaluation of data collection procedures and recommendations for improvement. Technical Memorandum.

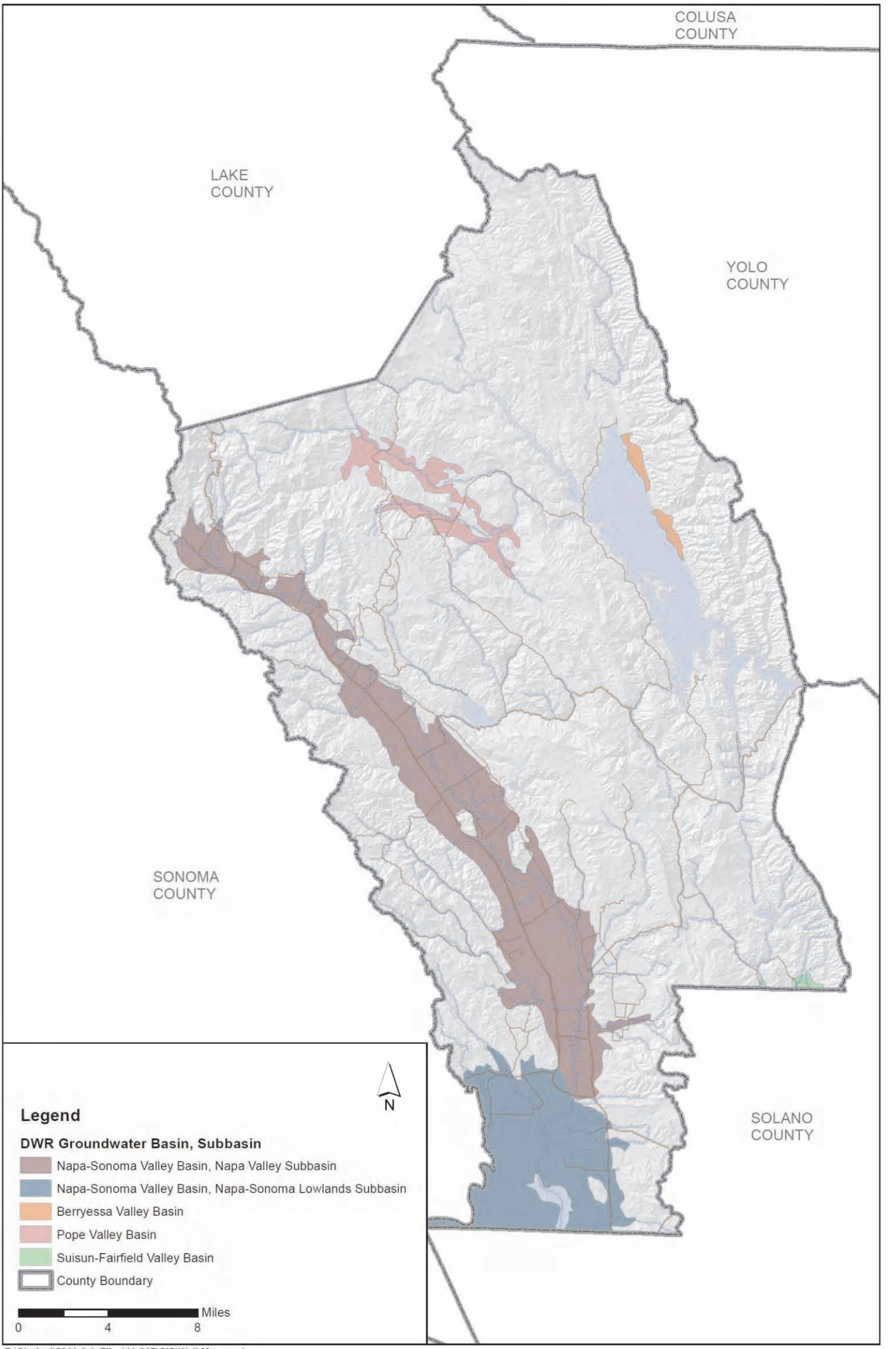
LSCE. 2010b. Task 1, Napa County data management system. Technical Memorandum.

LSCE. 2011. Napa County groundwater conditions and groundwater monitoring recommendations. Task 4, Report.

Napa County. 2008. Napa County general plan. (Amended June 23, 2009.)

Napa County Web Site. 2011. http://www.countyofnapa.org/planning/groundwater/

FIGURES



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LUHDORFF & SCALMANINI CONSULTING ENGINEERS

Figure 1
Napa County Groundwater Basins
Napa County, CA

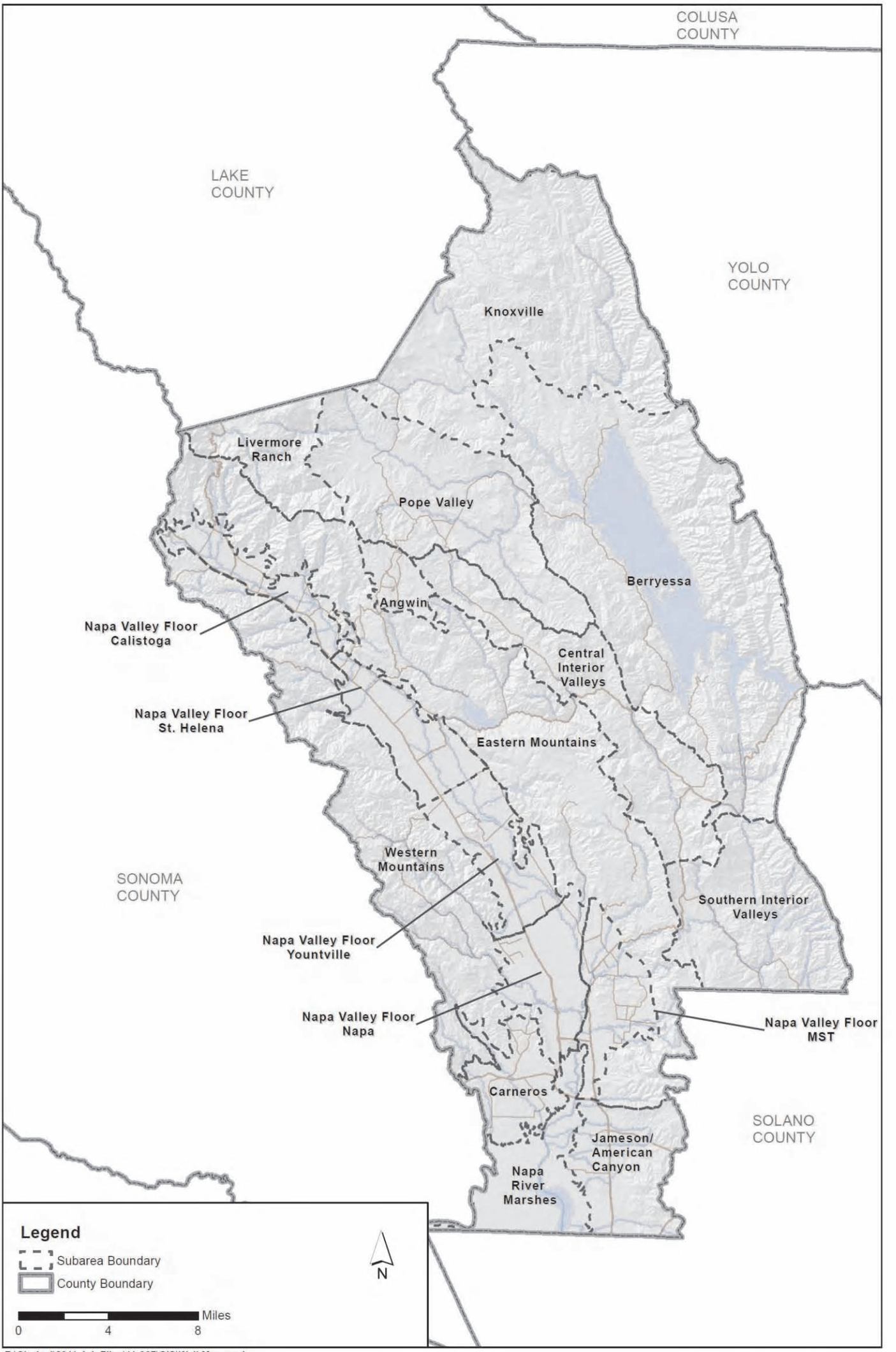

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Figure 2
Napa County Subareas
Napa County, CA

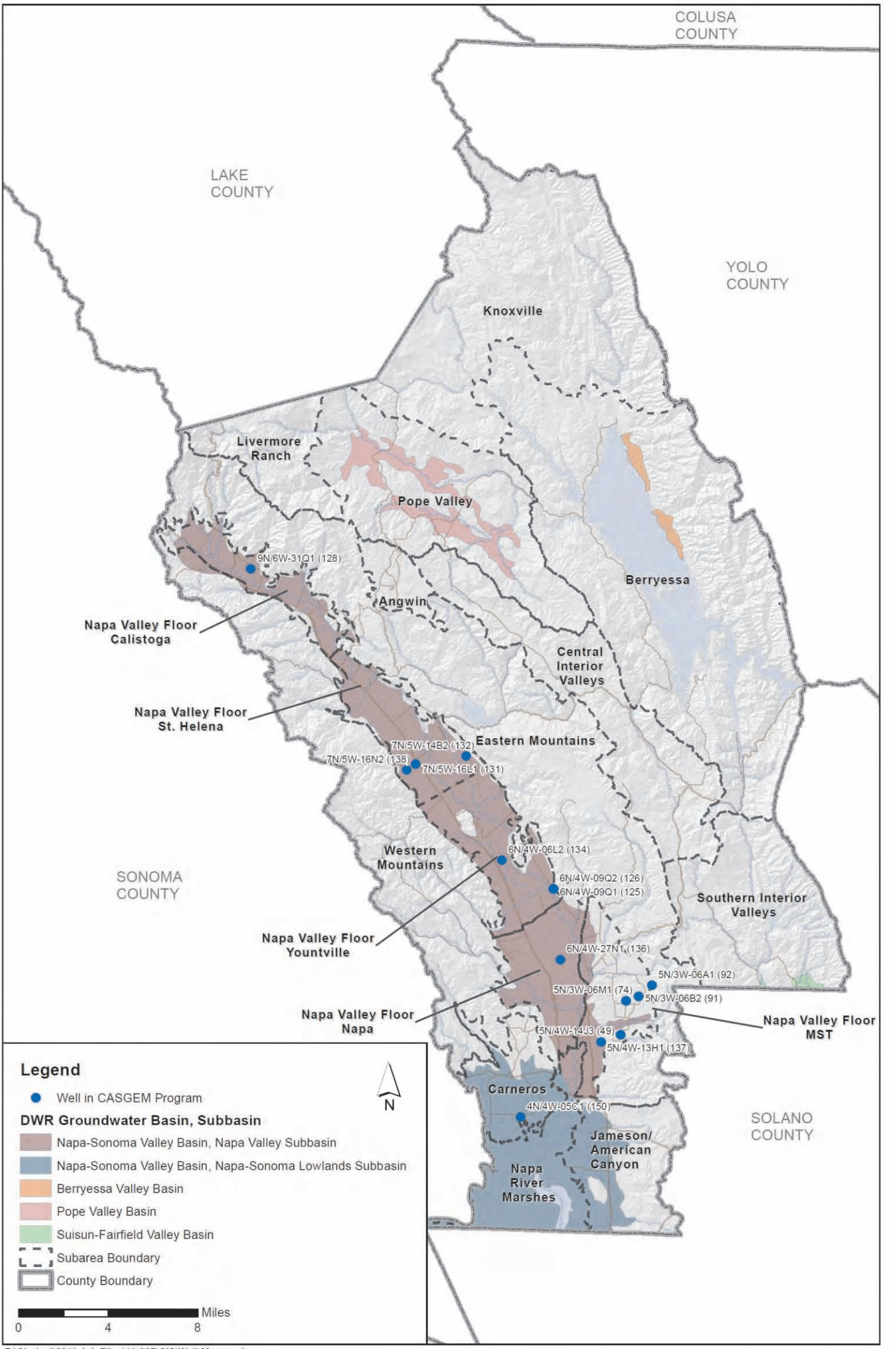

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Figure 3
Well Location Map for CASGEM Program
Napa County, CA

APPENDIX A

Napa County 2011 CASGEM Network
Well Information

Appendix A
Napa County 2011 CASGEM Network Well Information

General Well Information									Well Location					Well Elevation						Well Construction				
Napa County Subarea	DWR GW Basin Number[1]	State Well Number (County Well ID)	Water Level Period of Record	Msmt Frequency	# of Msmts	Aquifer Designation	Well Use	Operational Status	Latitude	Longitude	Coordinate Method	Horizontal Datum	Coordinate Accuracy (feet)	RPE Description	Reference Point Elevation (feet)	Ground Surface Elevation (feet)	Elevation Method	Vertical Datum	Elevation Accuracy (feet)	Well Completion Report Number	Date	Well Depth (feet)	Well Completion Type	Screened Interval (feet)
NVF-MST	--	5N/3W-06B2 (91)	1992-2011	SA	49	SV	Dom	Active	38.3086	122.2343	USGS Quad map approx.	NAD83	150	top of casing access NW	282.2	283	USGS Quad approx.	NAVD88	10	119632	Aug-1986	415	Single	315-415
NVF-MST	--	5N/3W-06A1 (92)	1999-2011	SA	18831	Qal/SV?	Dom	Active	38.31607	122.22374	GPS	NAD83	10	top of casing access East	298.7	298	GPS	NAVD88	5	Unk	1992	368	Single	Unk
NVF-MST	--	5N/3W-06M1 (74)	1999-2011	SA	14129	Qal/SV?	Dom	Active	38.30571	122.24438	GPS	NAD83	10	top of casing access South	133.2	132	GPS	NAVD88	5	Unk	Aug-1988	300	Single	Unk
NVF-MST	--	5N/4W-13H1 (137)	1979-2011	SA	56	Qal/SV?	Irr	Active	38.2834	122.2483	USGS Quad map approx.	NAD83	150	top of casing access North	135.9	135	USGS Quad approx.	NAVD88	10	Unk	Jul-1962	364	Single	Unk
NVF-Napa	2-2.01	5N/4W-14J3 (49)	1979-2011	SA	16654	Qal/SV	Unus	Inactive	38.2787	122.2640	USGS Quad map approx.	NAD83	150	top of rim open well	78.8	78	USGS Quad approx.	NAVD88	10	28141	pre1948	399	Single	Unk
NVF-Napa	2-2.01	6N/4W-27N1 (136)	1979-2011	SA	64	Qal?	Dom/Irr	Active	38.3313	122.2994	USGS Quad map approx.	NAD83	150	top of casing access East	53.5	53	USGS Quad approx.	NAVD88	10	Unk	1962	120	Single	Unk
NVF-Yountville	2-2.01	6N/4W-06L2 (134)	1963-2011	SA	92	Qal	Irr	Active	38.3948	122.3497	USGS Quad map approx.	NAD83	150	end of 1 1/2" pipe, West	83.7	83	USGS Quad approx.	NAVD88	10	23607	Aug-1955	260	Single	160-260
NVF-Yountville	2-2.01	6N/4W-09Q1 (125)	1979-2008	SA	64	SV?	Dom	Active	38.3769	-122.3065	USGS Quad map approx.	NAD83	150	top of casing access South	65.8	65.0	USGS Quad approx.	NAVD88	10	59015	Aug-1971	160	Single	63-160
NVF-Yountville	2-2.01	6N/4W-09Q2 (126)	1984-2008	SA	54	SV?	Dom/Irr	Active	38.3770	-122.3067	USGS Quad map approx.	NAD83	150	top of casing access North	65.8	65.0	USGS Quad approx.	NAVD88	10	59036	Nov-1971	345	Single	140-345
NVF-St. Helena	2-2.01	7N/5W-14B2 (132)	1962-2011	SA	97	Qal/SV	Irr	Active	38.4616	122.3811	USGS Quad map approx.	NAD83	150	top of casing access East	143	142	USGS Quad approx.	NAVD88	10	28427	pre1948	265	Single	25-265
NVF-St. Helena	2-2.01	7N/5W-16L1 (131)	1963-2011	SA	96	Qal	Dom	Active	38.4557	122.4225	USGS Quad map approx.	NAD83	150	top of casing hole as elec. N	174.8	174	USGS Quad approx.	NAVD88	10	28434	Jul-1939	221	Single	7 lengths
NVF-St. Helena	2-2.01	7N/5W-16N2 (138)	1949-2011	SA	97	Qal/SV?	Dom/Irr	Active	38.4518	122.4299	USGS Quad map approx.	NAD83	150	top of casing access South	196.1	196	USGS Quad approx.	NAVD88	10	Unk	1923 approx	321	Single	Unk
NVF-Calistoga	2-2.01	9N/6W-31Q1 (128)	1962-2011	SA	99	Qal	Unus	Inactive	38.5794	122.5630	USGS Quad map approx.	NAD83	150	top of casing access North	344	343	USGS Quad approx.	NAVD88	10	Unk	1931	50	Single	Unk
Carneros	2-2.03	4N/4W-05C1 (150)	1958-2008*	SA	28*	Qal?	Unk	Unk	38.2285	-122.3290	Unk	Unk	Unk	Unk	Unk	33	USGS Quad approx.	NAVD88	10	28479	1948	155	Single	Unk

Definitions: SA (Semi-annual); Dom (Domestic); Irr (Irrigation); Unus (Unused); Unk (Unknown); Qal (Quaternary Alluvium); SV (Sonoma Volcanics)

[1]DWR Groundwater Basin Number: 2-2.01 (Napa-Sonoma Valley GW Basin, Napa Valley Subbasin), 2-2.03 (Napa-Sonoma Valley GW Basin, Napa-Sonoma Lowlands Subbasin)
*Period of Record for historical water quality

APPENDIX B

Napa County Procedure for
Measuring Groundwater Levels

NAPA COUNTY PROCEDURE FOR MEASURING THE DEPTH TO WATER IN MONITORING AND PRODUCTION WELLS

Purpose

To obtain an accurate dated and timed measurement of the static depth to water in a well that can be converted into a water level elevation in reference to a commonly used reference datum (e.g., NAVD 1988). In this context, static means that the water level in the well is not influenced by pumping of the well. For comparability, measurements should be obtained according to an established schedule designed to capture times of both highest and lowest seasonal water level elevations. Also for comparability, measurements during a particular field campaign should be obtained consecutively and without delay within the shortest reasonable time.

Measurement Procedure

- If well is being pumped, do not measure; return later, but not sooner than 60 minutes.
- Turn on water level indicator signaling device and check battery by hitting the test button.
- Remove access plug or well cap from the well cover and lower probe (electric sounder) into the well.
- When probe hits water a loud “beep” will sound and signal light will turn red.
- Retract slightly until the tone stops.
- Slowly lower the probe until the tone sounds.
- Note depth measurement at rim (i.e., the surveyed reference point for water level readings) of well to the nearest 0.01 foot and rewind probe completely out of well.
- Remove excess water and lower probe once again into well and measure again.
- If difference is within ±0.02 foot of first measurement, record measurement.
- If difference is greater repeat the same procedure until three consecutive measurements are recorded within ± 0.02 foot.
- Rewind and remove probe from well and replace the access plug or well cap in the well cover.
- Clean and dry the measuring device/probe and continue to next well.

Special Circumstance – Oil Encountered in Well

If oil is detected in the well structure, the depth to the air-oil interface is measured. To obtain such a measurement, the electric sounder is used similar to the way chalked steel tapes were traditionally used for depth-to-water measurements.

1. Lower the cleaned probe well below the air-oil interface (e.g., 1 foot). Read and record the depth at the reference point (since this depth is chosen somewhat arbitrarily by the field technician, an even number can be chosen, e.g., 37.00 feet). This measurement is the length of cable lowered into the well and corresponds to a line that the oil leaves on the probe or cable (i.e., the oil inundation line). Above this line, smudges of oil may appear on the cable. Below this line, the cable/probe is completely covered with oil. If the probe is lowered too far, completely penetrates the oil, and is far submerged in the water below the oil, parts of the probe/cable below the oil inundation line may also appear smudgy.
2. Retrieve probe, identify and record the oil inundation line on the cable (e.g., 2.72 feet). This measurement does not reflect the thickness of the oil. It reflects the length of the cable below the air-oil interface.
3. Compute the depth to oil by subtracting the length of line below the air-oil interface from the corresponding measurement at the reference point: Depth to oil = 37.00 feet – 2.72 feet = 34.28 feet.

Since oil has a slightly smaller density than water, a depth-to-oil measurement will always be smaller than a corresponding depth-to-water measurement in the same well if oil were not present. Depth-to-oil measurements yield a reasonable approximation to depth-to-water measurements unless the oil thickness is great. For each foot of oil in the well casing, the depth-to-oil measurement will be approximately 0.12 foot smaller than a corresponding depth-to-water measurement if oil were not present.

Recordation

1. Name of field technician
2. Unique identification of well
3. Weather and site conditions (e.g., clear, sunny, strong north wind, intense dust blowing over wellhead from nearby plowed field; dry ground, easy access)
4. Condition of well structure (e.g., well cap cracked – replaced with new one; wasp hive between well casing and well housing; no action, discuss with project manager)
5. Time and date of depth-to-water reading
6. Any other pertinent comments (e.g., sounder hangs up at 33 feet, thus no measurement; or: fifth measurement of ~55.68 feet in a row…residual water in end cap?; or: oil in well…measurement is depth to oil; or: intense sulphur odor upon opening well cap; or: nearby (west ~100 feet) irrigation well pumping)

CALIFORNIA STATEWIDE GROUNDWATER ELEVATION MONITORING
(CASGEM)

STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES

GROUND WATER LEVEL MEASUREMENTS

Monitoring Entity: Napa County
Monitoring Period:_____
Measuring Agency Number: 3983
Measured By:_____

STATE WELL NUMBER	COUNTY WELL ID	MSRMNT DATE	R.P. ELEVATION (NAVD88 ft)	DIST. R.P. TO WATER	METHOD OF WATER DEPTH MSRMNT	MSRMNT QUALITY CODES[1]	MSRMNT TIME	COMMENTS

1 MEASUREMENT QUALITY CODES:

- If **no** measurement is taken, a specified "no measurement" code, must be recorded.
  0. Discontinued 1. Pumping 2. Pumphouse locked 3. Tape hung up 4. Can't get tape in casing 5. Unable to locate well 6. Well destroyed 7. Special 8. Casing leaking or wet 9. Temporarily inaccessible D. Dry well F. Flowing well
- If the quality of a measurement is **uncertain**, a "questionable measurement" code can be recorded.
  0. Caved or deepened 1. Pumping 2. Nearby pump operating 3. Casing leaking or wet 4. Pumped recently 5. Air or pressure gauge measurement 6. Other 7. Recharge operation at nearby well 8. Oil in casing 9. Acoustical sounder measurement

A Tradition of Stewardship
A Commitment to Service

Napa County
Groundwater Resources
Advisory Committee

DRAFT COMMUNICATION AND EDUCATION PLAN

Draft for Discussion on December 12, 2011
Drafted by Dorian Fougères, Center for Collaborative Policy, CSUS

I. Purpose and Overview

- This plan serves as a strategic guide for the public communication and education activities of the Napa County Groundwater Resources Advisory Committee (GRAC).
- The **communication goal** of the plan is to ensure that interested parties (e.g., members of the public, non-government organizations, and public agencies), and Napa County residents as a whole, are well-informed of the deliberations and activities of the GRAC.
- The **education goal** of the plan is to increase the understanding of groundwater resources so that interested parties and Napa County residents as a whole have a factual basis for discussion and decision making.
- Foundational elements of this plan include objectives and principles, audiences and potential partners, and messages. A series of communication and education strategies follow. The last element is an evaluation of plan implementation. An appendix lists names of potential partner agencies and organizations.

II. Objectives and Principles

1. Objectives

A. To ensure that interested parties and residents as a whole are aware of the work, schedule, progress, and deliberations of the GRAC, and have opportunities to provide input.
B. To expand participation in the County's voluntary groundwater monitoring efforts.
C. To establish a common understanding of groundwater resources in the County, including hydrogeologic conditions and trends evidenced by monitoring data and analyses.
D. To support more informed public dialogue and public policy decision-making regarding groundwater resources in Napa County.
E. **QUESTION: WHAT OBJECTIVES ARE MISSING OR UNCLEAR?**

2. Principles

A. The GRAC will proactively develop relationships and conduct activities related to communication and education.
B. The GRAC will partner with interested parties to leverage existing networks and outreach efforts, and to make the best use of limited resources.

DRAFT

C. The GRAC will provide Information and materials on a timely basis to allow interested parties and residents to consider information and, as appropriate, provide input and participate.
D. The GRAC will consistently characterize its aims and activities in the same ways, so that people in different arenas hear the same messages.
E. The GRAC will tailor its messages and materials to different audiences to increase their effectiveness.
F. **QUESTION: WHAT PRINCIPLES ARE MISSING OR UNCLEAR?**

III. Audiences and Partners

Groundwater resource issues involve an array of geographical and interest-based audiences, including:

A. Landowners and other interested parties in the Pope Valley, Clearlake Pleistocine Volcanic Area, and Berryessa Valley groundwater basins.
B. Landowners and other interested parties in the Napa-Sonoma Valley groundwater basin, including the Milliken-Sarco-Tulocay, Angwin, Carneros, Calistoga, St. Helena, Yountville, and Napa sub-areas.
C. Environmental, agricultural, development, community, and landowner and homeowner interests.
D. Public agencies and elected officials.

QUESTION: WHAT OTHER KEY AUDIENCES ARE MISSING? WHICH ARE TYPICALLY OVERLOOKED?

Specific groups, organizations, and agencies will need to be identified, see Appendix 1 below.

Messages and materials will variously need to address County residents as a whole, or to be tailored to specific audiences.

Additional special audiences will need identification, such as disadvantaged communities.

Some members of these audiences may choose to support the County's communication and education efforts, thereby becoming the County's partner in outreach. In the 2010 Stakeholder Assessment, several organizations volunteered to use their existing networks to help share information and news with their constituencies; these will be critical to maximizing the efficiency and effectiveness of outreach efforts. Additional partners will be solicited as activities are developed.

Partners may also include specific press and media, see Appendix 2 below.

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IV. Messages

1. Universal Messages

A. The GRAC
   a. The GRAC is authorized by the Board of Supervisors and charged with making recommendations on (1) data needs, (2) a monitoring program, (3) pump test protocols and related revisions to the County's groundwater ordinance, (4) the conceptualization of hydrogeologic conditions, (5) groundwater sustainability objectives, and (6) building community support.
   b. GRAC members are appointed by the Board of Supervisors and represent the County's geographic and interested-based diversity. This includes each of the County's sub-areas and property, agricultural, and environmental interests, among others.

B. GRAC meetings are open to the public and all materials are available on their website.

C. Groundwater resources
   a. The County's geographic and geological diversity mean that the status and trends of groundwater resources vary dramatically from place to place. Recognition of this diversity is a fundamental starting point for the GRAC's work and activities.
   b. A common fact-based understanding of groundwater resources in the County will support more informed public dialogue and public-policy decision-making. While public observations help to identify concerns, factual information and thoughtful technical analyses will provide the foundation for GRAC decision-making.

QUESTION: WHAT ARE THE GRAC'S KEY MESSAGES?

2. Objective-Specific Messages

On the activities of the GRAC and public involvement, see Universal Messages above. Other messages will need to match the objectives developed by the GRAC. Examples include:

A. Participation in Voluntary Groundwater Monitoring
   a. Purpose of the effort
   b. What data will be gathered, when and by whom, and how it will be used
   c. Confidentiality
   d. Benefits to and incentives for participants

B. Importance of better understanding hydrogeologic conditions
   a. Purpose of the effort to update the hydrogeologic conceptualization of the valley
   b. How this information will be used and refined as more information becomes available

C. Education on Major Issues
   a. Messages will need to be developed for specific topics identified

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3. Special Messages

These will be developed as needed, for example, for specific geographic areas or for special audiences.

V. Communication and Education Strategies

This section identifies six primary communication and education strategies that provide a framework for more specific activities. Each strategy includes information on supporting materials, audiences that would benefit specifically, next steps and when these would occur, and constraints that will need to be managed.

1. Use the GRAC's website as the clearinghouse for all information and materials associated with the GRAC meetings and the communication and education efforts.

Materials: will post existing materials developed for meetings and activities
Special Target Audiences: none (it is for all audiences)
Next Steps & Timelines: the website has been official and functioning since June, 2011
Constraints: organization and accessibility as documents accumulate
Potential partners: none (the County will have to maintain the website)

2. Develop and maintain an interested parties email and address distribution list, including denotation of parties that express an interest in partnering.

Materials: email and address data management software, and existing news, promotional and educational materials (see below)
Special Target Audiences: individual interested parties
Next Steps & Timelines: develop and solicit initial list during 1st quarter of 2012, with ongoing expansion and maintenance
Constraints: need to maintain up-to-date entries
Potential partners: none (the County will have to develop the list)

3. Proactively develop and regularly utilize relationships with key press and media outlets for the purpose of sharing news and information.

Materials: meeting synopses, joint statements developed by the GRAC, telephone calls
Special Target Audiences: Napa County residents as a whole
Next Steps & Timelines: County staff to identify and contact at major press and media outlets during 1st quarter of 2012, and then utilize as needed
Constraints: inability to control final products, need to adhere to GRAC Media Protocol
Potential partners: *Napa Valley Register*

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4. Develop a standardized series of general promotional and educational materials, as well as activity-specific and topic-specific materials as needed.

Materials: trifold and booklet brochures, annual newsletter (electronic and hard copy)
Special Target Audiences: directly impacted audiences
Next Steps & Timelines: general promotional materials during 1st quarter of 2012, activity- and topic-specific materials in coordination with the GRAC's work plan
Constraints: need for subject matter expertise
Potential partners: none (the County will have to develop materials)

5. GRAC members periodically (e.g., twice a year) brief the geographical or interest-based groups that they serve on, participate in, or recommend, as applicable.

Materials: standard promotional materials; short powerpoint presentation with talking points about work plan, progress, and milestones
Special Target Audiences: constituencies represented on the GRAC, regional and sub-regional groups, community-based groups
Next Steps & Timelines: identify initial dates for briefings (e.g., March and October 2012), prepare materials
Constraints: need for consistent messaging and characterization of the GRAC's activities
Potential partners: organizations that GRAC members participate in

6. GRAC members and County staff conduct an annual round of briefings for elected officials and agency executive officers, including but not limited to via the Napa County Watershed Information Center and Conservancy (WICC).

Materials: standard promotional materials
Special Target Audiences: state legislative representatives, county supervisors, mayors and councilmembers, federal and state agency executive officers
Next Steps & Timelines: identify appropriate period for briefings and schedule well in advance (e.g., Joint GRAC-WICC meeting in June 2012), identify appropriate briefing format and appropriate group to conduct briefings, develop needed promotional materials
Constraints: limited availability of elected officials and agency executive officers
Potential partners: none (GRAC members will work with County staff)

7. The GRAC hosts public workshops or other public events to support the rollout of key deliverables, such as the County's monitoring program, revised pump test protocols and related revisions to the groundwater ordinance, and groundwater sustainability objectives.

Materials: special announcements; materials to support the event activities

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Special Target Audiences: Napa County residents as a whole, perhaps with identical workshops in the northern and southern parts of the County
Next Steps & Timelines: agree upon deliverables that will need a public rollout component, the type of public input desired (e.g., comment on draft, comment on final), and a corresponding timeframe (e.g., late 2012 for the draft groundwater monitoring program, mid-2013 for the draft protocols and ordinance revisions, and mid 2014 for the draft objectives)
Constraints: need for advance scheduling and publicity to ensure turnout, significant logistical and administrative work, and associated costs; this discussion will influence the next version of the GRAC's work plan
Potential partners: WICC, other local organizations or educational groups

QUESTIONS: WHAT ARE THE MOST EFFECTIVE WAYS TO REACH OUR AUDIENCES? HOW WILL YOU HELP? WHO ELSE CAN HELP US?

VI. Evaluation

As part of its normal business, the GRAC will evaluate annually the effectiveness of its communication and education efforts, and revise this plan accordingly.

Appendix 1: Potential Audiences and Partners

A. California Department of Water Resources
B. City of American Canyon
C. City of Calistoga
D. City of Napa
E. City of St. Helena
F. City of Yountville
G. Ducks Unlimited
H. EcoVines
I. Fire Safe Councils
J. Friends of the Napa River
K. Get a Grip on Growth
L. Groundwater Under Local Protection
M. Homeowner associations
N. Living Rivers Council
O. Los Carneros Water District
P. Napa County Farm Bureau
Q. Napa County Resource Conservation District
R. Napa County Watershed Information Center and Conservancy
S. Napa Sanitation District
T. Napa Valley Grape Growers Association
U. Napa Valley Land Stewards Alliance
V. Napa Valley Vintners
W. Regional Water Quality Control Board
X. Sierra Club, Napa County Chapter
Y. State legislative representatives
Z. Trout Unlimited
AA. USDA Natural Resource Conservation Service
BB. OTHER AUDIENCES AND PARTNERS?

Appendix 2: Potential Press and Media Partners

A. Napa Valley Register
B. OTHER PRESS AND MEDIA PARTNERS?

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