



A Tradition of Stewardship
A Commitment to Service



December 12, 2011

COMMENTS AND QUESTIONS RECEIVED REGARDING GROUNDWATER CONDITIONS

Overview of This Document

Members of the Napa County Groundwater Resources Advisory Committee (GRAC) were asked at their October 27, 2011, meeting to review and provide comments on Chapter 4, Groundwater Conditions, of the *Napa County Groundwater Conditions and Groundwater Monitoring Recommendations* final report, produced by Luhdorff & Scalmanini Consulting Engineers. The comments were solicited to help develop presentation materials for the GRAC's December 12, 2011, meeting.

Five members submitted comments and questions on a range of topics. Speaking generally,

1. Several comments and questions will be covered during the December 12, 2011, presentation on groundwater conditions.
2. Other comments and questions are likely to be addressed as the GRAC assists the County staff and technical consultants with recommendations regarding (A) the further synthesis of existing information and identification of critical data needs; (B) the conceptualization of hydrogeologic conditions in various areas of the County, and an assessment of groundwater resources as data becomes available; and (C) the development and implementation of an ongoing groundwater monitoring program.
3. Other comments and questions focus on planning questions (e.g., future demand and supply estimates), and are thus beyond the purpose of the GRAC.
4. Other comments and questions concern the GRAC collaborative process.

The full list of actual questions and comments submitted is provided below.

This document presents an initial sorting of comments and questions, developed by staff and technical consultants into the four categories described above. The sorting serves as a recommendation of whether, and if so when, to best address the comments and questions provided, and is for GRAC discussion following the groundwater conditions presentation on December 12, 2011.

1. Topics to be Covered on December 12, 2011

- The integration of city wells in the County's monitoring program
- The range of wells historically and currently being monitored by the County and others, and the duration they have been monitored
- Extraction in different parts of the County
- The factual basis (or lack thereof) for public perceptions of groundwater conditions (further discussion is also planned as part of Category 2)

2. Topics Likely to be Addressed during Future GRAC Activities

- The relationship between groundwater conditions and environmental conditions, particularly streams
- The location of primary areas of groundwater recharge
- Funds available for new monitoring wells, and the reuse of retired wells

3. Planning Topics beyond the Charge of the GRAC

- The relationship between groundwater conditions and home construction in hillside areas
- The use of water by wineries and trends in winery construction
- Trends in the use of drain tile and relationship to groundwater
- Future demands for urban, residential, and agricultural water use, and potential mismatches with future supplies (except to the extent this concern drives the development of "sustainability objectives" towards the end of the GRAC's work)
- The relationship between agricultural and residential groundwater use in rural areas
- The use of recycled water to replace demands on groundwater

4. Questions concerning the GRAC Collaborative Process

- The definition and scope of the problem that GRAC is seeking to address
- The County budget and detailed information of funds available to support the GRAC
- The need for detailed presentations on County water and groundwater regulations and policies
- The need for the GRAC to hear from a wide range of experts with practical and theoretical experience
- The need to assess the level of confidence/uncertainty associated with specific concepts

List of Comments and Questions Submitted by GRAC Members

#	Comment	Member	Date	Initial Response
1	The St. Helena General Plan Update (October 2010 draft), not yet adopted, states that the City will "collaborate with Napa County to establish an ongoing monitoring program to assess the long-term viability and recharge capability of the North Basin aquifer that supplies the City's wells." The City has two monitoring wells at/near its Stonebridge Well Complex (which contains its two production wells, as well as a small water treatment plant) near the Napa River south of the Pope Street Bridge. Has the County requested the spring/fall elevation data from the City's monitoring wells? If so, what tentative conclusions has it drawn if any? If not, does the County plan to make the City's monitoring wells part of the County monitoring program? If not, why not?	Alan Galbraith	11/21/11	To be covered on December 12. The County is willing to include cities subject to their permission and willingness to provide data.
2	In the 2006 ground water study the county had 30 or so wells that they had water level readings on twice a year. The records went back a number of years. Is the county still taking those yearly? All the well reporting that the consultants are looking into, how many have been continually monitored for the last 10 years with readings each one of those years.	Steve Soper	11/16/11	To be covered on December 12.
3	How many homes have been built in the unincorporated county over the last ten years? How many in the hills, and what impact do they have on ground water supply? In general, what is the impact of ground water usage in the hills as compared to the valley floor?	Michael Haley	11/16/11	Specific numbers and the relative importance of recent housing developments are beyond the purpose of the GRAC, which is charged with monitoring, data collection, and analysis. The GRAC is not charged with assessing or estimating historical or future groundwater demands although it may consider these issues when developing "sustainability criteria" and next steps.
4	How many brick and mortar wineries have been added in the last ten years, and how much water do they use on average per winery, per size of winery, etc.	Michael Haley	11/16/11	Same as previous.
5	Even if it is determined that there are plentiful groundwater resources in a particular area, what impact does a large draw down have on the environment?	Michael Haley	11/16/11	The general relationship between groundwater conditions and environmental conditions, including groundwater-surface water interactions, is likely to be covered by the GRAC's hydrogeologic conceptualization effort.

6	<p>In reviewing the Final August 2010 Report entitled “Assessment of the Feasibility of a Collaborative Groundwater Data Gathering Effort in Napa County” (“CCP Report”) prepared by the Center for Collaborative Policy at Sacramento State University (“CCP”), there were a number of questions that arose from my reading of the Report covering the interviews conducted by CCP and the conclusions that they reached as a result of those interviews. It seems that the interviews identified a number of key perceptions regarding the use and status of groundwater resources in Napa County, some of which may be true and some of which may not be true. It seems that the NCGRAC, in order to adequately fulfill its responsibilities, needs to understand and agree on which of those perceptions are true (based upon good science) and which are not. Luhdorff & Scalmanini (“LS”) potentially has the facts and science from their work to assist the members of the NCGRAC in determining which of those perceptions are supported by facts and science and which are not. Below is a series of questions that I would like to have input from LS on with regard to statements and conclusions from the CCP Report:</p>	Jim Verhey	11/17/11	<p>For context: The assessment documented issues of concern to stakeholders. It was not a technical assessment of groundwater conditions, and did not attempt to substantiate the concerns raised by interviewees. One of its key recommendations was to gather and synthesize existing scientific data.</p>
7	<p>“NC Groundwater is being extracted at unsustainable rates”:</p> <p>a. Is that a true statement for Napa County as a whole?</p> <p>b. Is that a true statement for each of the water basins in Napa County or is it true for only certain basins? Which ones and why for those basins?</p>	Jim Verhey	11/17/11	<p>Groundwater data are not available for all subareas of the county, as such Part “a” cannot be fully addressed. Part “b” is likely to be covered on December 12. Based on available groundwater data, chronically declining groundwater levels and evidence of groundwater deficiency appears largely limited to the Milliken-Sarco-Tulocay area.</p>
8	<p>“Potential for urban and residential use to diminish the groundwater available for agriculture”:</p> <p>a. Is there sufficient groundwater, over the long-term, for both urban and residential and agricultural uses?</p> <p>b. If not, how much is the likely shortfall in water resources and when is it likely to first occur? What are some of the options available to address such a shortfall?</p> <p>c. Is recycled water a viable option for agriculture? How about for Urban and residential uses?</p>	Jim Verhey	11/17/11	<p>Estimating future demands and supplies, associated contingency planning, and evaluating the use of recycled water as an alternative supply is beyond the charge of the GRAC, although these issues may inform development of “sustainability objectives” and next steps.</p>

9	<p>“Drawing down of groundwater could noticeably reduce streamflows, and thus threaten aquatic and riparian habitat, stimulate creekbank erosion and weaken fish populations”:</p> <p>a. Is that true? If yes, how much is the impact likely to be and over what period of time?</p>	Jim Verhey	11/17/11	<p>As with #5, the general relationship between groundwater conditions and environmental conditions, including groundwater-surface water interactions, is likely to be covered by the GRAC’s hydrogeologic conceptualization effort. Estimating future demands and corresponding relationships with the surrounding environment is beyond the charge of the GRAC.</p>
10	<p>“Agricultural overdraft is causing problems for [non-agricultural] rural areas [such as MST]”:</p> <p>a. Is this a true statement and supported by LS’s investigation/analysis? How significant is the impact of agricultural use?</p> <p>b. If agricultural use is not the primary cause of problems in the MST or Carneros basins, what is?</p>	Jim Verhey	11/17/11	<p>Estimating the relative importance of agricultural groundwater use is beyond the charge of the GRAC, which is charged with monitoring data collection and analysis.</p>
11	<p>“Use of drain tile in vineyards is impacting the recharge of the water basins in Napa County”:</p> <p>a. Where, actually, are the primary areas of recharge for the water basins in Napa County?</p> <p>b. How extensive actually is the use of drain tile in vineyards in Napa County?</p> <p>c. Is it possible that the use of drain tile could have a material impact on the recharge of the water basins in Napa County?</p>	Jim Verhey	11/17/11	<p>Identification of recharge areas is likely to be covered by the GRAC’s hydrogeologic conceptualization effort. Estimating the use of particular technologies and their relative importance for recharge is beyond the charge of the GRAC.</p>
12	<p>After the introductory meeting in October and after reviewing the documents distributed at that meeting, here’s my response to the County Staff’s request for Questions and Requests from the committee members:</p>	Tucker Catlin	11/21/11	<p>Not applicable.</p>
13	<p>THE PROBLEM. After reading through all of the materials, I’m still not sure that I have a crystal clear idea of what the problem is that we’re being tasked to solve. So my first request is that we invest some time at the outset developing some committee consensus on a simple and clear DEFINITION and SCOPE OF THE PROBLEM. A thorough Problem Definition can lead to a quicker and clearer Solution.</p>	Tucker Catlin	11/22/11	<p>The Board of Supervisors established the GRAC to provide recommendations on a series of topics. Each topic will require its own discussion to clarify its importance, scope, and intended use.</p>

14	<p>THE COSTS AND FUNDING. According to the documents, this committee is being asked to make recommendations regarding monitoring wells in Napa County. In order to do that responsibly, we need to START with a clear context of the resources available to accomplish (and ultimately influence) the scope of this task. A good introduction would be: A short presentation of the COUNTY BUDGET for the next fiscal year(s) showing SOURCE OF FUNDS (pie chart with a detailed list in \$ and % of total) and USE OF FUNDS (same), along with comments about the Source and Use of Funds for this particular project. This key element of COSTS and FUNDING needs to be at the beginning instead of at the end (or entirely absent from) our considerations and deliberations.</p>	Tucker Catlin	11/23/11	<p>The Department of Conservation Development and Planning has budgeted sufficient resources to support the next phase of LSCE's work through June 2013. The County has also devoted staff time to support the GRAC and has a grant from DWR for facilitation support through June 2012. Additional grant funding to support the GRACs efforts will be identified and pursued in 2012 and future years. DWR still has very limited grant funding available.</p>
15	<p>THE LAW. Before making any new regulations, we should have a fairly thorough presentation of the various Water and Groundwater Regulations (AND Policies) already in effect in Napa County.</p>	Tucker Catlin	11/24/11	<p>The County General Plan's water resources policies were presented on October 27, 2011. Additional detail will be provided on specific topics as needed to support GRAC discussions (e.g., for revising the County's groundwater ordinance). A detailed presentation on the County's groundwater ordinance is anticipated for the fall of 2012. The GRAC will not be developing any regulations except that it is expected to recommend changes to the County's groundwater ordinance needed to update pump test procedures.</p>
16	<p>THE EXPERTS. Locating and assessing groundwater has long been a topic with many unknowns, and (therefore) a very broad range of interpretations and opinions. The only reliable truth about wells is that you won't know if there's any water down there until you dig the hole and drop a pump in. We should minimize our inevitable misconceptions by hearing from a wide range of experts with the greatest practical and theoretical and local experience. For this topic, one voice is not enough.</p>	Tucker Catlin	11/25/11	<p>The County selected Luhdorff & Scalmanini Consulting Engineers (LSCE) through a rigorous, competitive process. LSCE will serve as the primary technical support to the GRAC. Additional expert support or review will require the Board of Supervisors to allocate additional funds. Professionals with relevant subject matter expertise are invited to attend GRAC meetings and share their experience.</p>
17	<p>THE CONFIDENCE FACTOR. Finally, we need to ask each of the various Experts to elaborate on the predictive uncertainties inherent to "Hydraulic Concepts", especially under different scenarios, and especially in earthquake country. We need to know what is the Confidence Factor that we're investing in (eg how many test wells are required for a reasonable statistical confidence to draw a conclusion?).</p>	Tucker Catlin	11/26/11	<p>Clarifying the assumptions, uncertainties, and confidence levels associated with specific concepts and approaches will be an important part of LSCE's presentations and communication with the GRAC.</p>

18	I found the power point frame from Ludhorf Scalmanini's presentation which shows a total of 181 Level Monitor Wells and 182 Quality Monitor Wells under "Current Groundwater Monitoring". Apparently before the cost cuts in 2005 there were 382 Level Monitor Wells and 211 Quality Monitor Wells. That's a lot more than I expected. Question for Patrick's list: If there were funding cutbacks in 2005, do we have any new funds for new monitor wells?	Tucker Catlin	12/2/11	To be covered on Dec. 12. The numbers relating to the historically and currently monitored wells referenced in the cited slide include wells that have been monitored by a number of entities, including the County. Special studies such as the USGS study of the MST area included increased monitoring during that study period (and later reduction in the number of monitored wells when the study was completed).
19	If so, how much and what's the finding source?	Tucker Catlin	12/2/11	See previous.
20	If funded, can any of the retired wells be brought back to useful life?	Tucker Catlin	12/2/11	See previous.