A Tradition of Stewardship
A Commitment to Service

Napa County
Groundwater Resources
Advisory Committee

AGENDA

REGULAR COMMITTEE MEETING

Thursday, June 27, 2013, 2:00 p.m.

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

Committee Members

Michelle Benvenuto
Tucker Catlin
Alan Galbraith
Don Gleason
Dave Graves
Michael Haley
Peter McCrea
Charles Slutzkin
Steve Soper
Marilee Talley
Bill Trautman
Jim Verhey
Susanne von Rosenberg
Duane Wall
Dale Withers

1. CALL TO ORDER & ROLL CALL

2. WELCOME & OPENING REMARKS *(Chair)*

3. ORGANIZATIONAL ITEMS *(15 min) (Staff, Consultant, Committee)*
   a. APPROVAL OF ACTION MINUTES & MEETING SUMMARY
   b. REVIEW WORK PLAN/SCHEDULE
   c. REVIEW MEETING AGENDA AND PROCESS
   d. FOLLOW-UP ON QUESTION(S) FROM LAST GRAC MEETING
      - GROUNDWATER RECHARGE MODEL FOR NAPA VALLEY

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:

   COMMITTEE REVIEW, DISCUSSION & DIRECTION

   a. DISCUSSION OF INDUSTRY/PUBLIC OUTREACH & WELL OWNER OUTREACH *(45 min)*
      (Patrick Lowe, Natural Resources Conservation Mgr./Public Works)
      - UPDATE ON OUTREACH EFFORTS BY COMMITTEE/STAFF
      - DISCUSS OUTREACH MATERIALS AND ANY ADDITIONAL NEEDS/UPDATES
      - Q&A - DISCUSS GRAC QUESTIONS

   b. REVIEW, DISCUSSION AND RECOMMENDATIONS ON THE UPDATED DRAFT GROUNDWATER ORDINANCE/PERMIT PROCESS *(45 min)*
      (Hillary Gitelman, Director/PBES Dept.; Vicki Kretsinger Grabert/LSCE)
      - REVIEW/DISCUSSION OF UPDATED DRAFT GW ORDINANCE
      - Q&A - DISCUSS GRAC QUESTIONS
      - RECOMMENDATIONS

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- COMMITTEE BREAK (CHAIR TO CALL WHEN NEEDED)

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

   c. REVIEW AND DISCUSSION OF DRAFT WATER AVAILABILITY ANALYSIS UPDATE *(30 min)*
   (Steve Lederer, Director/Public Works; Vicki Kretsinger Grabert/LSCE)
      - REVIEW/DISCUSSION OF DRAFT WAA UPDATE
      - Q&A - DISCUSS GRAC QUESTIONS

   d. CONSIDERATION OF APPOINTING AN AD-HOC COMMITTEE TO BEGIN WORK ON DEVELOPMENT OF GROUNDWATER SUSTAINABILITY OBJECTIVES *(10 min)*
   (Patrick Lowe, Natural Resources Conservation Mgr./Public Works)
      - DISCUSS AD-HOC COMMITTEE CREATION AND APPOINTMENTS
      - Q&A - DISCUSS GRAC QUESTIONS

   e. DISCUSS JOINT GRAC-WICC BOARD MEETING ON THURSDAY/JULY 25 *(10 min)*
   (Patrick Lowe, Natural Resources Conservation Mgr./Public Works)

6. OTHER BUSINESS

7. ANNOUNCEMENTS

   a. UPCOMING EVENTS OR ITEMS OF INTEREST FROM THE COMMITTEE AND STAFF (*5 min)*

8. FUTURE AGENDA ITEMS

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

   - Meeting Date: Thursday, July 25, 2013 – 4:00 p.m.
   - Location: Yountville Community Center

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
April 25, 2013

1. CALL TO ORDER & ROLL CALL

The Napa County Groundwater Resources Advisory Committee (GRAC) met in regular session on Thursday, April 25, 2013 with the following members present:
Tucker Catlin; Alan Galbraith; Don Gleason; Dave Graves; Chair Peter McCrea; Charles Slutzkin; Steve Soper; Marilee Talley; Bill Trautman; Jim Verhey; Susanne von Rosenberg; and Duane Wall. Michael Haley arrived during Item 4; Vice-Chair Michelle Benvenuto arrived during Item 5.c; and Dale Withers was excused.

2. WELCOME & INTRODUCTIONS

Chair Peter McCrea provided opening comments.

3. ORGANIZATIONAL ITEMS

a. APPROVAL OF ACTION MINUTES AND MEETING SUMMARY

Action Minutes and Meeting Summary of the February 28, 2013 regular meeting approved.

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

b. REVIEW WORK PLAN/SCHEDULE

Patrick Lowe, Natural Resources Conservation Program Manager, Public Works, referenced the latest version of the Work Plan included in the agenda packet and mentioned upcoming items of business.

c. REVIEW MEETING AGENDA AND PROCESS

Dorian Fougères, Ph.D., Mediator, Center for Collaborative Policy, CSUS, briefly reviewed the background and purpose of each agenda item.

4. PUBLIC COMMENT

None.

5. PRESENTATIONS AND DISCUSSION ITEMS

a. REPORT ON BOARD OF SUPERVISORS UPDATE/PRESENTATION

Chair Peter McCrea reported on the presentation made at the April 2, 2013 Board of Supervisors meeting. Mr. McCrea referenced the staff report included in the agenda packet and stated the presentation focused more on the GRAC's efforts and what was planned for the near future. The importance of confidentiality for well locations was stressed as a very important issue in terms of improving the probability of the success of the program. The Board was very sympathetic to the situation, but they cannot give an iron-clad opinion. Minh Tran, County Counsel, stated at the Board meeting that all is rather moot until the issue is raised by someone requesting information, as it is hard to deal with ahead of time, but if it were left to County Counsel, they would definitely try to keep confidentiality in place. District 5 Board of Supervisor Keith Caldwell mentioned at the Board meeting that he believed there was a confidentiality agreement in place for wells in the Tulocay area, as these wells are monitored in much greater detail. Hillary Gitelman, Director, Planning, Building and Environmental Services, clarified that although there isn't an explicit agreement, the information is kept confidential. Mr. McCrea added that the Board was very pleased with the GRAC's work and current status. Patrick Lowe, Natural Resources Conservation Program Manager, Public Works, mentioned that Janice Killion, Deputy County Counsel, was present today in Mr. Tran's absence and he reiterated Mr. Tran's opinion that County Counsel would defend confidentiality to the extent possible on a case-by-case basis. Mr. Lowe also distributed a newspaper article about a Public Records Act request that was related to an agriculture item at U.C. Davis wherein the request was taken to court and the court denied the release of the information. Ms. Killion stated the Board did express their commitment to maintain the confidentiality of the documents in the event someone would ask for well monitoring data. Then, if it should ever go to court, the court would weigh it by a case-by-case basis, and County Counsel would do the same. County Counsel would have to see the request before deciding how to respond, but the initial response would likely be to deny the request. If the County were sued, they would then have to take another look and decide how to proceed. In any event, the specific landowner would be contacted.

b. FOLLOW-UP ON QUESTIONS FROM PRESENTATION ON UPDATED HYDROGEOLOGIC CONCEPTUALIZATION AND CHARACTERIZATION OF CONDITIONS

Vicki Kretsinger Grabert, Principal Hydrologist, LSCE, distributed a map, cliff notes and a PowerPoint handout. The map, which addresses a previous question and indicates average annual recharge per acre by watershed area, was created by taking a map and numbers directly from the Updated Hydrogeologic Conceptualization and Characterization of Conditions Report (Hydro Report). However, there is some caution on putting too much weight on the numbers because they do not take into account the myriad kinds of variables, such as slopes, water-year type and geologic materials, but they provide a broad idea. The cliff notes were generated from a conference call between a subset of the GRAC to discuss the last meeting and the next steps, and there were varying degrees of what did all of the information present. The point of the cliff notes was to summarize the essential information and to have it used as talking points for the GRAC as they do outreach to potential volunteers. The cliff notes touched on the overarching interests of the Hydro Report and Napa County Groundwater Monitoring Plan (Plan); purpose of the updated hydrogeoleogic conceptualization; groundwater monitoring recommendations in the Hydro Report and Plan; importance of improving the understanding of groundwater/surface water interaction; and groundwater recharge – a key component of water budget of a groundwater basin. Susanne von Rosenberg mentioned she would like to further discuss the thresholds at

another time. The PowerPoint handout addresses a question by Duane Wall related to water level responses and geologic conditions in the MST area. Three example wells shown in a hydrograph located in the northern, central and southern areas of the MST subarea had the following information depicted: water level trends over time that showed some degree of decline but also stability; the complexity of the geology of the whole MST area as viewed from the surface; cross sections with water level trends, well depth and geologic surface types/units; examples of rock material; and a north/south cross section that shows a comparison of the geologic surfaces of the two areas in which the southern area has a much more limited aerial distribution of the Tuffaceous geologic surface (principal water bearing formation) than the northern area. Ms. Kretsinger Grabert stated that even though some historical documents refer to the MST as a basin, the DWR doesn't designate it as such. LSCE's work refers to it as a subarea, so it is not one that is broadly defined by alluvial deposits that are unconsolidated; it has a lot of geologic complexity to it. It is very dependent on where this recharge occurs and what the thresholds might be and how they are used. An electronic version of the PowerPoint handout will be emailed to the GRAC.

c. DISCUSSION OF INDUSTRY/PUBLIC OUTREACH & WELL OWNER OUTREACH

Patrick Lowe, Natural Resources Conservation Program Manager, Public Works, distributed folders to the GRAC that contained the final version of the outreach brochure and inserts, as well as lists of the outreach teams and potential candidate well owners, areas of interest maps and a PowerPoint handout. Mr. Lowe went through the handout, which focused on the background of groundwater resources, the GRAC, key groundwater efforts, groundwater monitoring, education and outreach, next steps, and sustainability. The GRAC's comments on the handout and other materials were as follows:

Comment	Member
Focus more on the practical issue rather than the understanding of what GRAC is about.	DW1
Both issues are important; focus on the practical side could be a separate presentation geared towards individual well owners.	PM
Cut a couple of slides out of the beginning. I would like to see more of a focus on what we still need to know and why (put before the Voluntary Groundwater Monitoring Program slide).	SV
Information on the Voluntary Groundwater Monitoring Program doesn't appear until slide 16. People should hear early on why their participation is needed.	MH
It would be less threatening to convey to the well owner that this is part of a confirmation process to get a better understanding of the situation.	JV
Have some material ready at presentations for well owners who express interest in volunteering.	SV
Add a slide that has what would be specifically asked of a well owner during a one-on-one conversation.	DG1
Add a slide that in general terms describes who the ideal candidate would be and a one-page handout that reiterates the criteria and has contact information.	SV
Re-sort the candidate list alphabetically to avoid duplicate contact efforts	DG1
Have State well numbers on the candidate list that correspond with Areas of Interest maps	DW1

Item 5.d…Continued

Tucker Catlin nominated Susanne von Rosenberg to work with Mr. Lowe on revisions to the PowerPoint handout and the candidate list, to which Ms. von Rosenberg agreed. Hillary Gitelman, Director, Planning, Building and Environmental Services, suggested having a one-page blank form wherein the contact information of a willing volunteer can be written down and given to staff for follow up. Dorian Fougères, Ph.D., Mediator, Center for Collaborative Policy, CSUS, suggested the GRAC briefly review the outreach teams list for confirmation or changes. Dave Graves offered to also assist with Areas 3 and 5. Michael Haley offered to also assist with Area 5. Michelle Benvenuto offered to also assist with Area 10. Mr. Fougères requested the GRAC review the Areas of Interest maps to see if they have any contacts within the areas where they are not part of the outreach team to possibly offer assistance.

d. REVIEW OF DRAFT GROUNDWATER ORDINANCE & PERMIT PROCESS UPDATES

Christine Secheli, Assistant Director, Planning, Building and Environmental Services, went over a technical memo that summarized the proposed changes to the County's Groundwater Ordinance, as well as redlined changes that appear in the latest draft of the Ordinance. Some of the specific changes Ms. Secheli discussed were as follows:

Section	Change
13.04.010 – C	**Intended to clarify when a water supply other than a well is acceptable.**
13.04.020	**Includes a provision for approved potable water supply for all development – not just dwellings.**
13.04.050	**Recommendation from the consultant was to do pumping for determination of yield. (Staff will get the opinion of a local well driller on this process and will investigate the idea of having one process for residential wells and another for agricultural/commercial wells.)**
13.04.090	**Added reference to the use of abutting lots, which puts into code that this is an option. (Item 13.04.090 will be corrected to remove the reference to sewer.)**
13.12.180	**Reference to groundwater being influenced by surface water shall be considered and treated as such was added by recommendation of the consultant. (Staff will look into providing the definition of "immediately below the surface" and the usage of the word "quality" and possibly rephrasing the related sentence.)**
13.12.340	**Increased minimum distance from property line from five feet to 25 feet and from a sewer line from 25 feet to 50 feet; added minimum distance of 25 feet for underground drainage – approved water tight piping and 50 feet for underground drainage – non-water tight piping. (Staff will review the GRAC's suggestions of having the property line and sewer line distances remain as they were, have the numbers be at the well driller's discretion, made applicable for water deficient zones or in relation to the distance of other wells. Staff will also review if the provisions for underground drainage are State well water standards. If so, they will remain. If not, staff will reconsider whether to include these provisions and if there is a way to reference agricultural context.)**
13.12.395	**Allows for an access opening into the well for water level measurements.**
13.12.480	**Updated to reflect current methods of well destruction per State well standards and Napa County Guidelines.**
13.15.010 – C	**Added cottage food operations as allowed by State law to the definition of "minor improvement"; and added definition of water conservation regulations for landscape design.**

Item 5.d…Continued

Section	Change
13.15.020 – G	**Added the requirement of completing a form to be registered with the County if hauled-in water will be used.**
13.15.030 – D	**Added the provision that the permittee shall provide access to the County to measure water levels in the spring and fall of each year, if requested, under ministerial approval.**
13.15.035	**Added the provision of projects subject to the State water efficient landscape requirements shall include information that demonstrates compliance.**
13.15.060 – E	**Although the Ordinance references the Water Availability Analysis Policy Report of August 2007, it is in the process of being updated and the revised version will be brought to the GRAC for their review and input; and "groundwater" will be added to the last sentence.**
13.15.075	**Added the provisions of requiring a groundwater permit for exporting water used outside of the county and prohibiting export without assuring the sufficiency of water supply for county uses, which implements the county use general plan water resources policy.**

Under 13.15.030 – C.2.c, Marilee Talley questioned the average of 0.30 of acre feet of water per acre and suggested this be changed if the threshold is going to be based on the Water Availability Analysis Policy. Ms. Secheli responded that staff will check if it would be more appropriate to have this defined in the Ordinance or in the Water Availability Analysis Policy.

Duane Wall stated that under 13.15.030 – C.1.c, it refers to a usage limit of .06 acre feet per year, which is approximately 500 gallons per day, but under 13.04.040, it refers to a sustained yield of not less than one gallon per minute per dwelling unit, which is about 1,440 gallons. Mr. Wall would like this amount to also be reduced to .06 acre feet per year. Ms. Secheli responded that one deals with construction and one deals with usage and if a water supply yields less than one gallon per minute, it doesn't meet State requirements, but staff will research.

Under 13.15.075, Don Gleason questioned if other counties would take umbrage if Napa County will require permits to export its water. Hillary Gitelman, Director, Planning, Building and Environmental Services, responded that staff will research. Ms. Gitelman also suggested the GRAC review all of the technical memo and the redlined changes in the Ordinance. There were some recommendations by LSCE mentioned in the memo that weren't included in the Ordinance, as well as two items that haven't been addressed, such as a no-net increase standard for projects in the MST that staff will draft language for the GRAC's review and whether it should be included in the Ordinance or in the Water Availability Analysis Policy.

6. OTHER BUSINESS

a. UPDATE ON DWR GRANT APPLICATION FOR GROUNDWATER MONITORING WELLS

Patrick Lowe, Natural Resources Conservation Program Manager, Public Works, reported that the County ranked ninth out of 98 applications overall and the DWR's technical advisory panel recommended $200,000+ in funding for Napa County rather than the $249,000 the County was seeking. Additionally, Alan Galbraith previously informed Mr. Lowe that there are possibly some wells in St. Helena that may be used for free, which would offset the $50,000 deduction in funding from the DWR.

7. ANNOUNCEMENTS

None.

8. FUTURE AGENDA ITEMS

Hillary Gitelman, Director, Planning, Building and Environmental Services, stated that staff would bring back the Ordinance with verification of revisions based on today's discussion, as well as discussion of the Water Availability Analysis Policy and how it might be revised.

Patrick Lowe, Natural Resources Conservation Program Manager, Public Works, stated that depending on the time frame, staff may introduce the beginning discussion of developing groundwater sustainability objectives.

Chair Peter McCrea would like to set aside one hour to discuss outreach activities and the status of people's efforts in trying to secure well monitoring volunteers.

9. ADJOURNMENT to the NEXT MEETING

Adjourned to the next regular meeting of the Napa County Groundwater Resources Advisory Committee on Thursday, June 27, 2013 at 2:00 p.m.

_____
PETER McCREA, Chair

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 = Don 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

MEETING SUMMARY

Napa County Groundwater Resources Advisory Committee

April 25, 2013

Produced by the Center for Collaborative Policy, CSUS

Meeting Synopsis

April 25, 2013 – GRAC 11th Meeting

The Napa County Groundwater Resources Advisory Committee (GRAC) held its 11th meeting on April 25, 2013. Mr. Peter McCrea, Chair, reported on the update and presentation he gave to the Board of Supervisors during their April 2, 2013 meeting, including the Board's strong support for keeping confidential the groundwater monitoring information associated with the County's Voluntary Groundwater Monitoring Plan. Ms. Vicki Kretsinger Grabert, Luhdorff and Scalmanini Consulting Engineers (LSCE), provided handouts and responded to questions the GRAC had posed at the last meeting about the Updated Hydrogeologic Conceptualization and Characterization of Conditions Report.

Mr. Patrick Lowe, Napa County, reviewed outreach materials/maps with the GRAC and a draft presentation that members will use to brief groups on the Voluntary Groundwater Monitoring Program. The GRAC discussed and agreed on additional outreach materials needed to help sign up volunteers and requested updates to simplify and shorten the presentation. Ms. Christine Secheli, Napa County, reviewed proposed revisions to the County's Groundwater Ordinance. The GRAC commented on the revisions and made suggestions for clarification or provided further direction. The GRAC's next meeting will be held on June 27, 2013.

Please see the GRAC's webpage (www.countyofnapa.org/bos/grac) for copies of the April 25, 2013 presentations and handouts.

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Action Items

1. **GREG MORGAN** to distribute hard copies of the final Napa County Groundwater Monitoring Plan 2013 to Committee members.
2. **PATRICK LOWE** to distribute slides from **VICKI KRETSINGER GRABERT**, as well as Outreach Powerpoint slides.
3. **VICKI KRETSINGER GRABERT, LSCE** and **LEE BERGFELD, MBK ENGINEERS** to relook at the "recharge in Napa Valley Area" map to consider a range of recharge values rather than one single recharge value and to discuss how one might represent recharge potential at the most appropriate scale (likely would require modeling, which is out of scope).
4. **SUSANNE VON ROSENBERG** and **PATRICK LOWE** to revise the "Outreach Presentation" to include the Committee's suggestions.
5. **SUSANNE VON ROSENBERG** and **PATRICK LOWE** to develop a one-page well candidate qualifications and County contact person sheet for interested individuals and a corresponding one-page sign-up sheet for individuals to write their contact info and members to then turn in to the County for follow-up.
6. **PATRICK LOWE** to provide a revised Area of Interest Contact Person Table that links the location with the State record well number.
7. **GRAC MEMBERS** to review Area of Interest Contact Person Table and notify the GRAC member who is leading outreach to that area of any people that they know and can help to contact.
8. **DAVID GRAVES** and **VICKI KRETSINGER GRABERT** to work together to identify well owners in Area of Interest 3.

9. **CHRISTINE SECHELI** to provide the legal definition of "potable water" (§13.04.020) and "projects" (§13.15.040).
10. **CHRISTINE SECHELI** to revise Ordinance including typo on page 3.
11. **STAFF** to determine where to add "threshold level of groundwater" (in the Water Availability Analysis or in the Ordinance).
12. **STAFF** to reach out to well drillers and investigate what type of tests are relevant for residential wells and which for commercial/agricultural wells for determining yield and adjust the legal language in §13.04.050 accordingly.
13. **STAFF** to review Groundwater Ordinance for items of concern flagged by Committee members.
14. **GRAC MEMBERS** to review the Memorandum of April 17, 2013 about the Recommended Groundwater Ordinance Changes, which includes recommendations by LSCE that the County chose not to include, as well as issues that haven't been addressed. These topics will be discussed during the Committee's June 27, 2013 meeting.

1. Call to Order & Roll Call

All members of the Napa County Groundwater Resources Advisory Committee (GRAC) were in attendance, except for Dale Withers who was excused.

2. Welcome & Opening Remarks

Chair Peter McCrea opened the session.

3. Organizational Items

a. Approval of Action Minutes & Meeting Summary

No corrections were suggested to the February 28, 2013 meeting minutes and meeting summary.

AGREEMENT: The February 28, 2013 meeting minutes and meeting summary were unanimously approved.

b. Review Work Plan/Schedule

The Work Plan was included in the meeting packet and reviewed.

ACTION ITEM: GREG MORGAN to distribute hard copies of the final Napa County Groundwater Monitoring Plan 2013 to Committee members.

c. Review Meeting Agenda and Process

Facilitator Dorian Fougères reviewed the agenda.

4. Public Comment

Chair Peter McCrea invited public comments. There were no public comments.

5. Presentations and Discussion Items

a. Report on Board of Supervisors Update/Presentation

Mr. Peter McCrea, Chair, reported on the update and presentation he gave to the Board of Supervisors during their April 2, 2013 meeting. The update was on the progress, schedule and accomplishments of the committee.

The Board of Supervisors showed strong support to treat the groundwater monitoring information associated with the County's Groundwater Monitoring Plan 2013, and particularly wells volunteered by private well owners, as confidential. Also, according to Janice Killion, Deputy County Counsel, the Board expressed their commitment to maintain confidentiality of the information, otherwise the public may not be willing to participate in such projects.

The Committee members can tell potential volunteers that there is no 100% guarantee that all information will remain confidential at all times. Potential volunteers need to understand that the Board of Supervisors has expressed their intent to protect all information to the extent that their powers allow them.

Mr. Patrick Lowe, Napa County, gave the Committee an article about a public records request for agriculture-related information was taken to court in Davis, CA.

QUESTIONS AND DISCUSSION:

- **Request for information.** Question: May someone, under the Public Records Act, ask for an entire database?
    - **Response:** Someone may ask this, but County Counsel has guidelines how to handle such a request and how to determine whether that information can be shared.

- **Well logs versus monitoring data.** Comment: There appears to a difference between the monitoring data that are collected and the well logs which are protected.
    - **Response:** Well construction logs are confidential under the California Water Code. Monitoring data are not covered by such a statutory exemption.

- **Question:** What information is secure under the Water Code?
    - **Response:** There is a specific list of items that are confidential. This includes items such as geographic coordinates and geology, amongst others.

- **Confidentiality Clauses.** Comment: A member noted that wells in the Tulocay area might have special confidentiality provisions. Another member clarified that this was not the case in the MST. A third member suggested that these could be dealt with on a case by case basis. One member suggested that it would be beneficial for the County to have a written policy on the topic.
    - **Response:** Janice Killion, Deputy County Counsel, indicated that such a policy could still be challenged. She noted that the Public Records Act is automatically weighted towards disclosure, regardless of what the Supervisors might say or put into writing.

Committee members received a number of maps that identify the parcels where well information is desired for a given Area of Interest. Mr. Lowe explained that the maps are to be used solely for the outreach purposes of the GRAC and are not to be shared publicly.

b. Follow-up on Questions from Presentation on Updated Hydrogeologic Conceptualization and Characterization of Conditions

Ms. Vicki Kretsinger Grabert, LSCE, responded to questions the GRAC had posed at the last meeting about the Updated Hydrogeologic Conceptualization and Characterization of Conditions Report.

The Committee received a map of the Recharge in Napa Valley Area by Hydrologic Period and “cliff notes” with key points. These documents are not in the actual report. The map gives a rough indication of the average annual recharge per unit area. It was drawn up in response to the requests of the Committee to give such an indication. Ms. Kretsinger Grabert cautioned against attaching too much weight to the numbers since

they do not take into account all parameters that would affect recharge and to realize that there are many variables per area that vary from acre to acre.

The cliff notes summarize the overarching interests for the Updated Hydrogeologic Conceptualization and Characterization of Conditions Report and the Napa County Groundwater Monitoring Plan 2013. They explain that according to the studies, the Upper part of the Main Napa Valley Floor and Angwin areas consists of geological units that have the greatest recharge potential. The points in the cliff notes could serve as talking points for the Committee members during their outreach activities.

The Committee also received a handout of slides. These slides were made to address the question concerning what is understood about the water level response in relation to the geologic conditions in the Milliken-Sarco-Tulucay (MST) Subarea. Different geological formations were identified near the selected wells in three areas (North, Central and South) of the MST. The study showed that in the Central area, there is limited distribution of the Tuffaceous geologic member of the Sonoma Volcanics, which is the principal water-bearing formation in the MST, as opposed to in the Northern and Southern areas. If more wells were to be constructed in the Central area, then it is likely that additional groundwater level decline would be experienced.

QUESTIONS AND DISCUSSION:

- **Implications.** Question: Does the map imply that the average annual recharge in Milliken Creek Watershed is 0.22 acre-feet/acre while at Dry Creek it is 0.18? This seems odd.
    - **Response:** This discrepancy illustrates why GRAC members are cautioned against relying on this map and the numbers provided. The map is extremely general and non-specific. Average annual values in the map are an average over the entire watershed for the period of available streamflow data for each watershed. Average annual recharge can be significantly different due to differences in precipitation for the periods analyzed. This is why precipitation and recharge data are provided for three common periods that can be used to make comparisons between some watersheds. Additionally, average annual recharge values do not take into account the areas within the watershed that have the geologic materials that actually have a greater potential for recharge. There are a lot more parameters to take into account when considering the recharge per acre within the watersheds (such as land cover, land use, slopes, etc.).

- **Reason for asking for an indication of the average annual recharge.** Comment: The main reason for asking for the average annual recharge is because of the "fair share concept," which is an acre-foot/acre use of water on the Valley Floor, 0.5 acre-foot/acre on the hillside and 0.3 acre-foot/acre in the MST. Given the information LSCE has given the Committee, what is the assessment of having such use volumes as thresholds?
    - **Response:** As a rule of thumb, such values are all right. However, the hydrogeology over the watersheds is too complex and variable to get locked into such a rule-of-thumb, especially when looking at groundwater availability in the long term. This is the same concern expressed earlier about the map.
    - **Concern:** If a watershed is not receiving an average potential recharge of 1 acre-foot per year, there shouldn't be extraction of more that an average of an acre-foot within the watershed. The estimated quantities of recharge and groundwater extraction are not the only factors to be considered in the overall water balance. This conversation may warrant further discussion.
- **Flow depth.** Question: At what depths are the recharge quantities used in the LSCE/MBK presentations?
    - **Response:** The computations were done based on the root zone water balance model, so depths below the root zone can vary with land cover, but the depth is typically greater than 10 feet.
- **Confidence factor.** Question: Lee Bergfeld, MBK Engineers, gave a confidence level of ±20% for the root zone water balance model calculation he presented during the Committee's January 31, 2013 meeting. What confidence factor could be give to the calculations in the depth zone of 10-500 feet?
    - **Response:** Mr. Bergfeld had attached the confidence factor to the variables in the computation of the amount of recharge that could occur within the soil-root zone and not what is going on in the subsurface or the entire system. There are many flow components in the 10-500-foot zone that were not part of the described computations.
- **Outflow as part of analysis.** Question: Since the outflow (i.e., subsurface groundwater outflow) out of the basin was not part of the analysis done, what value can the Committee attach to the calculations done and presented?
    - **Response:** The focus of the analysis up until now was on the more foundational, physical conceptualization before developing and using a surface water/groundwater flow model to best understand how the components within

and between the zones work together. The calculations presented were intended to give insight in potential recharge at a sub-watershed level and not to give acre-feet/acre values. This is why the cliff notes were made and LSCE cautioned the use of the values of "average annual recharge" in the distributed map.

ACTION ITEM: PATRICK LOWE to distribute slides from **VICKI KRETSINGER GRABERT**, as well as Outreach Powerpoint slides.

ACTION ITEM: VICKI KRETSINGER GRABERT, LSCE and **LEE BERGFELD, MBK ENGINEERS** to relook at the "recharge in Napa Valley Area" map to consider a range of recharge values rather than one single recharge value and to discuss how one might represent recharge potential at the most appropriate scale (likely would require modeling, which is out of scope).

c. Discussion of Industry/Public Outreach & Well Owner Outreach

The Committee received an outreach package that included:

- The final version of the Outreach Brochure and Inserts,
- Draft slides for an "Outreach Presentation,"
- A table of well owners already identified within the Areas of Interest, to aid Committee members in a number of areas of interest in finding well owners to approach,
- Maps of the 18 Areas of Interest, to aid Committee members in understanding within which specific areas well locations are to be sought.

The slides, table and maps are for use by the Committee during their outreach activities only and are not to be disclosed publicly.

Mr. Patrick Lowe, Napa County, presented the draft slides of the presentation for use in briefing groups that have common interests as part of the well owner outreach activities. The other documents were discussed as well.

QUESTIONS AND DISCUSSION:

- **Suggestions for adjustments to the "Outreach Presentation"**:
    - Update the slides to include the page numbers in the mentioned documents (such as the Napa County General Plan, the Napa County Monitoring Plan 2013

and the comprehensive groundwater resources study of LSCE, i.e., the report Napa County Groundwater Conditions and Groundwater Monitoring Recommendations [2011]) to which Committee members can refer.

  - Adjust the focus of the presentation on what the Committee still needs to know and why, rather than on what the Committee is and how it functions. The presentation does not address strongly enough why monitoring is needed and why the Committee is asking for volunteers.
  - Avoid focusing that volunteers are needed to "address gaps," as this sounds negative. Rather, volunteers are needed to improve the understanding of the groundwater movement, groundwater conditions and the interaction between groundwater and surface water. The work should be framed as proactive avoidance of potential problems.
  - Include a slide in which the general criteria for an "ideal" volunteering candidate (i.e., ideal candidate well) are described.

- **Additional information for individual outreach.** An additional one-page handout was desired in which the description of the "ideal" candidate is given and the subsequent steps to becoming a volunteer whose well would be considered for inclusion in the network are described.
- **Well Owner information.** Comment: Mr. Michael Haley knows about one-third of the people on the list the Committee received.
  - **Response:** Committee members are asked to review the list and to communicate with the other members who are part of the Volunteer Outreach Team for the subsequent Area of Interest.
  - **Clarification from Staff:** The well owners list does not include Areas of Interest 1, 2, 3, 16 and 17 because LSCE did not use well logs for those areas as part of the recent hydrogeologic work. However, the Volunteer Outreach Team responsible for those areas is requested to find potential volunteers without the list as a guide.
  - **Comment:** The distributed maps of the Areas of Interest give an indication of the specific Area on Interest. The list of well owners indicates the already-known well owners.
  - Committee members are urged to remember that well owners within that area but who are not on the list should be approached too.

- **Other sharing opportunities:**
  - Mr. Michael Haley and Ms. Marilee Talley will assist Ms. Michelle Benvenuto in reaching out to well owners in Area of Interest 5.
  - Mr. David Graves knows a number of the well owners in Areas of Interest 5 and 1.
  - Ms. Michelle Benvenuto knows a number of well owners in Area of Interest 10.
  - Mr. Michael Haley advised Committee members to contact vineyard managers. If vineyard managers do not give the OK, owners are likely not to participate.

ACTION ITEM: SUSANNE VON ROSENBERG and **PATRICK LOWE** to revise the "Outreach Presentation" to include the Committee's suggestions.

ACTION ITEM: SUSANNE VON ROSENBERG and **PATRICK LOWE** to develop a one-page well candidate qualifications and County contact person sheet for interested individuals and a corresponding one-page sign-up sheet for individuals to write their contact info and members to then turn in to the County for follow-up.

ACTION ITEM: PATRICK LOWE to provide a revised Area of Interest Contact Person Table that links the location with the State record well number.

ACTION ITEM: GRAC MEMBERS to review Area of Interest Contact Person Table and notify the GRAC member who is leading outreach to that area of any people that they know and can help to contact.

ACTION ITEM: DAVID GRAVES and **VICKI KRETSINGER GRABERT** to work together to identify well owners in Area of Interest 3.

COMMITTEE BREAK

d. Review of Draft Groundwater Ordinance & Permit Process Update

At the last meeting the Committee received the Technical Memorandum: Groundwater Planning Considerations and Review of Napa County Groundwater Ordinance and Permit Process, prepared by LSCE for the County in January 2011. Ms. Christine Secheli, Napa County, reviewed proposed revisions to the County's Groundwater Ordinance. The

Committee commented on the revisions and made suggestions for clarification or further direction.

QUESTIONS AND DISCUSSION:

- **Use of surface water (§13.04.010).** Question: Can surface water be used for domestic use? Response: Yes, if the person has the water rights to the surface water and ensures that the water is extensively treated.
- **Use of abutting lots (§13.04.090).** Suggestion for adjustment: Paragraph A: Item 1, reads "Provide access … to connect a building sewer…," this needs to be adjusted for this document.
- **Connection required (§13.04.20).** Question: Guest units have previously been defined as having independent cooking facilities. Does that mean that this paragraph pertains to guest units as well?
    - **Response:** If there is a guest unit, the owner should already have a main unit and would have verified their water supply for the main unit. If a second dwelling unit (for commercial or residential use) were to be constructed, the County wants to make sure the yield is sufficient. The code previously did not speak to commercial use.
- **Potability (§13.04.030).** Question: Is there a list of contaminants that well water needs to be tested for when a domestic well is drilled? Response: For residential development, a well is assumed to be potable unless it is drilled in an area that is known to be an area of contamination, which may require additional testing.
- **Determination of yield (§13.04.050).** Question: What type of pumping is referred to in paragraph A? Does this mean a pump well test has to be carried out by a well crew rather than the drilling crew? Because that is quite an intensive test and not realistic for most domestic wells, staff should contact the well drillers in Napa and find out what such a requirement would mean for them and how it would affect the cost per foot to drill a well.
- **Surface water (§13.12.180).** Questions and suggestions for clarification:
    - Paragraph A. What does "immediately below the surface of the ground" actually mean?
    - Paragraph B. What does it mean if groundwater is "connected to surface water?" Suggestion to clarify this in the document. Response: Means "any water beneath the ground …" (definition in Title 22, Division 4, chapter 17 as cited the paragraph). Staff will review this item.

        - Paragraph B: The word “quality” was added, but does not seem to make the sentence clearer. Staff will review this item.

- **Distance from other facilities (§13.12.340).** Question: Why was the property line changed from 5 to 25 feet?
    - **Response:** This change was made largely to avoid interference from wells near to each other. A footnote was also included which states “this setback shall be reduced to no less than 5 feet if required…”
    - **Concern:** It was not clear why the minimum distance from the property line was set to 5 feet, the following suggestions were given:
        - Keep the setback distance at 5 feet.
        - Make the 25-foot distance a rule only in areas that could be vulnerable to interference from nearby wells, so not county-wide.
        - Define the distance between wells instead of based on property lines.
        - Leave the distance (more than the 5-foot minimum) at well driller’s discretion.
        - Apply this provision only at County’s discretion.

- **Underground Drainage Question:** Are the two issues at the top of page 15 (underground drainage – approved water tight piping and non-water tight piping) new topics that were in included? What is an “underground drain” precisely? Does it include agricultural drainage?
    - **Response:** Underground drainage refers to French drain and drain tile.
    - **Concern**: If “underground drainage” does include agricultural drainage, it affects a lot of properties. Suggested that staff reconsider inclusion of these two items.
    - **Response:** The County ordinance needs to be at least as stringent as the State ordinance, so staff will check if it comes from the State Water Well Standards. If so, this will be the basis of the provision. Otherwise, the items will be reconsidered. Either way, staff will consider how to re-write them to fit the agricultural context of the county.
- **Groundwater conservation (§13.15).** This chapter was written to be applicable for the entire county, but if the exemptions are followed, then most of the document is applicable mainly to the MST area at the moment, since it is the only groundwater deficient area in the county. This should be clarified.

- **Definitions (§13.15.010).** Question: Could the term “threshold level” of groundwater be defined within this paragraph? Response: This term is defined in the Water

Availability Analysis.

- **Groundwater permit required (§13.15.020).** In paragraph G, a sentence was added to include that water hauling is to be reported as well. At the moment, only groundwater use requires a permit and there is no way of knowing what non-groundwater users are doing, though water hauling has an impact (such as truck traffic).
- **Classification of applications (§13.15.030).** Inclusion of allowance by owner to the County to measure well water levels of each new well.
- **Applicability of water conservation regulations for landscape design (§13.15.035).** Question: What is the definition of "projects" in this paragraph?
    - **Response:** The reference is to a State code that refers to residential landscapes above a certain size.
    - **Question:** What is the "information" that applicants are supposed to provide?
    - **Response:** If someone is subject to the water efficient landscape ordinance (WELO) - above 5,000 square feet for residential landscape and 1,200 square feet for commercial - landscape plans have to be submitted to demonstrate compliance with water conservation standards.
- **Application for groundwater permit (§13.15.060).** This paragraph refers to a "Water Availability Analysis" policy report which is not yet revised and will be discussed at the next GRAC meeting.
    - **Suggestion:** Expand more on the text in paragraph E.
- **Processing of groundwater permit applications (§13.15.070).** The added text was included to allow extra information about a well (i.e., location, proximity to other wells) if the threshold is exceeded.
    - **Response:** At the moment, it appears this can be done at someone's discretion rather than linking it to the Water Availability Analysis.
    - **Suggestion:** Staff should read the paragraph carefully and adjust text accordingly so that it does not imply relying on someone's judgment.
- **Permit required for export (§13.15.075).**
    - **Suggestion:** Exclude properties such as those in Carneros or Gordon Valley that have a well in one county but irrigate in the other.
    - **Question:** How will other counties respond if permits are required to import water into Napa County?

        - **Response:** Other counties are looking into this issue as well. The County will look further into what a uniform response/reaction would be.

- **General suggestion:** To make sure that water rates and yields are uniform throughout the document. For example, in §13.15.030, paragraph C, subsection C., "0.60 acre feet" is used, but in §13.04.040, "one gallon per minute" is used.
    - **Response:** It will be checked whether these values come from a County or State ordinance or whether one rate is from a construction ordinance or use ordinance.

ACTION ITEM: CHRISTINE SECHELI to provide the legal definition of "potable water" (§13.04.020) and "projects" (§13.15.040).

ACTION ITEM: CHRISTINE SECHELI to revise Ordinance including typo on page 3.

ACTION ITEM: STAFF to determine where to add "threshold level of groundwater" (in the Water Availability Analysis or in the Ordinance).

ACTION ITEM: STAFF to reach out to well drillers and investigate what type of tests are relevant for residential wells and which for commercial/agricultural wells for determining yield and adjust the legal language in §13.04.050 accordingly.

ACTION ITEM: STAFF to review Groundwater Ordinance for items of concern flagged by Committee members.

ACTION ITEM: GRAC MEMBERS to review the Memorandum of April 17, 2013 about the Recommended Groundwater Ordinance Changes, which includes recommendations by LSCE that the County chose not to include, as well as issues that haven't been addressed. These topics will be discussed during the Committee's June 27, 2013 meeting.

6. Other Business

a. Update on DWR Grant Application for Groundwater Monitoring

Mr. Patrick Lowe, Napa County, provided an update on the DWR Grant Application. The grant from Napa County was recommended but for a little less than the County applied for. Mr. Alan Galbraith suggested there were a few wells in St. Helena that could be monitored for free, which would mean the proposed activities could be carried out even with the reduced funding from the DWR Grant. [These wells could complement, but are not a replacement for, the type of monitoring wells described in the grant application.]

7. Announcements

There were no announcements.

8. Future Agenda Items

a. Upcoming Events or Items of Interest from the Committee and Staff

- One hour of the next meeting will be set aside to discuss outreach activities and update.
- The Groundwater Ordinance will be brought back.
- A draft revised Water Availability Analysis will be reviewed.

9. Adjournment to the Next Meeting

The Committee's next regular bi-monthly meeting will be held June 27, 2013 – 2:00 p.m. to 5:00 p.m. All meetings will be held at the Agricultural Commissioner's Office/UCCE Conference Room, 1710 Soscol Avenue, in Napa.

Attendees

Groundwater Resources Advisory Committee Members

1. Michelle Benvenuto
2. 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 Troutman
12. James Verhey
13. Susanne von Rosenberg
14. Duane Wall

Public Attendees

15. Mark Nordberg, DWR

County Staff/Facilitator/Consultant Attendees

16. Deborah Elliott
17. Dorian Fougères, CCP
18. Hillary Gitelman
19. Vicki Kretsinger Grabert, LSCE
20. Janice Killion
21. Daisy Lee
22. Patrick Lowe
23. Phil Miller
24. Greg Morgan
25. Martine Schmidt-Poolman, CCP
26. Christine Secheli
27. Jeff Sharp
28. Rick Thomasser

GRA Committee Work Plan

2011

- **October 2011** — 1st Meeting of GRAC; Welcome/Intro; Organization; GW Study Background
- **December 2011** — GW Study; Background; CASGEM; Outreach/Ed

2012

- **February 2012** — Sonoma County GW Program; GW Concepts; Consultant Scope of Work; Well Demo; Comm/Ed Plan
- **April 2012** — Outreach/Ed; MST Update; Outline of GW Monitoring; Data Mgmt/ Well Conf
- **June 2012** — Adopt Mission St; Comm/Ed; Hydro Cond. Concept.; GW Monitor-Plan(1-3)
- **July 2012** — Joint GRAC-WICC Meeting
- **August 2012** — GW Monitor-Plan(1-7); Adopt Comm -Ed Plan; Outreach; Broch/Info
- **October 2012** — Work Plan; Data Mgmt/ Disclosure; GWM Plan AOIs; Outreach; Broch/Info; Next steps>

2013

- **January 2013** — GWM Plan Adoption; Outreach; Broch/Info; LSCE Hydro-Condition & Recharge (Part I)
- **February 2013** — LSCE Hydro-Conditions (Part II); GW Data Mgmt; Outreach Schedule; GW Ordin Updates (Intro)
- **April 2013** — GW Ordin Updates (cont'd); Outreach Activities Updates
- **June 2013** — Ed/Outreach Updates; GW Ordin Updates; WAA Updates; Sustainability Ad-Hoc
- **WE ARE HERE**
- **July 2013** — Joint GRAC-WICC Meeting
- **August 2013** — Ed/Outreach Updates; WAA Updates; Begin GW Sustainability Objectives

2014

- **Oct 2013 to June 2014** — Develop GW Sustainability Objectives; Surface/GW Inter-relation; CASGEM Update
- **July 2014** — Joint GRAC-WICC Meeting
- **Aug 2014 to Dec 2014** — Conclude GRACs Work; Final Recomms to Board

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Title 13 - WATER, SEWERS AND PUBLIC SERVICES

April 2013 DRAFT – Recommended Changes

Chapter 13.04 - APPROVED WATER SUPPLY SYSTEMS

Sections:

13.04.005 - Director defined.

13.04.010 - Approved water supply system defined.

13.04.020 - Connection required when.

13.04.030 - Potability of water supply.

13.04.040 - Minimum sustained yield for individual supply.

13.04.050 - Determination of yield.

13.04.060 - Compliance prerequisite to permit issuance.

13.04.070 - Water storage tank requirement.

13.04.080 - Resolution of conflicts with other regulations.

13.04.090 – Use of abutting lots.

13.04.005 - Director defined.

The term "director" as used in this chapter shall mean the director of planning, building, and environmental services, or the director's designee.

(Ord. No. 1374, § 1, 9-11-2012)

13.04.010 - Approved water supply system defined.

An "approved water supply system" shall mean any of the following:

A. A public utility;

B. A public water system as defined in the California Health and Safety Code Section 116275 and approved by the appropriate authority, including a public water system for which a permit has been issued pursuant to the aforementioned code;

C. An individual water supply system consisting of a well constructed to these standards. If a well meeting these standards that provides an adequate supply per section 13.04.040 cannot be constructed, an approved water supply may consist of a~~,~~ spring or any other source approved by the director and developed in accordance with and meeting the standards of this ~~division~~chapter.

(Ord. 1252 § 8, 2005: Ord. 1159 § 1 (part), 1999)

(Ord. No. 1374, § 2, 9-11-2012)

Comment [c1]: Added comma after constructed, removed comma after a (before spring), changed division to chapter. Suggestions by GRAC member.

13.04.020 - Connection required when.

Every new commercial or residential development ~~dwelling unit,~~ for which a building permit is issued or for which an application for the issuance of a building permit is made, shall be connected to an approved water supply system that provides an adequate and reliable supply of pure, wholesome,

healthful and potable water. An applicant proposing a new or modified commercial development must demonstrate that the water supply will provide a reliable and adequate supply of potable water at all times, including but not limited to peak daily demand and in dry years. As related to residential development, Aa dwelling unit, for purposes of this chapterdivision, shall mean a room or connected rooms constituting a separate, independent, housekeeping establishment, physically separated from other rooms or dwelling units in the same structure and containing independent cooking or sleeping facilities.

(Ord. 1159 § 1 (part), 1999)

13.04.030 - Potability of water supply.

An individual water supply system shall provide water which is pure, wholesome, fit or suitable for drinking and potable and does not endanger the lives or health of persons or otherwise adversely affect the public welfare.

(Ord. 1159 § 1 (part), 1999)

13.04.040 - Minimum sustained yield for individual supply.

The source of an individual water supply system shall have a sustained yield (as determined by Section 13.04.050) of not less than one gallon per minute per each dwelling unit.

(Ord. 1159 § 1 (part), 1999)

13.04.050 - Determination of yield.

A. The determination of yield of any wellwater supply source shall be provided by the applicant through tests performed by a person duly licensed to perform such tests in the state of California. The expense of such testing shall be borne by the applicant or the applicant's agentmade by continuous pumping until the production rate is established and the drawdown level stabilized for at least one hour. Wells with less than five gallons per minute shall be tested at maximum production for at least four hours. Other methods for the determination of yield may be required by the director and must receive prior approval by the director.

B. The determination of yield of any water source under this division shall be made by the director and shall be supported by a record of tests performed by a person duly licensed to perform such tests in the state of California. The expense of such testing shall be borne by the applicant or the applicant's agent.

C. The sustained yield of any water source shall be measured by bailing, pumping, air lifting, or by any manner that is generally accepted within the well-drilling industry. Determination of the sufficiency of such measurement and of the supporting records, however, shall rest solely with the director. If a water source cannot maintain a minimum sustained yield as referenced in it shall not be considered an approved water source. Water sources may not be combined for the purpose of meeting the required minimum sustained yield.

D. Yield tests for springs shall be performed during the period from June 1st through October 31st unless otherwise approved by the director.

(Ord. 1159 § 1 (part), 1999)

(Ord. No. 1374, § 3, 9-11-2012)

Comment [c2]: Suggested by GRAC member-added and in dry years, changed division to chapter

Comment [c3]: Regulations in State Code for potability are intended to regulate public water systems not individual systems and requires much more extensive testing and monitoring than would ever be required for an individual supply. Additionally, potability isn't actually defined in the State drinking water regulations even though it is used numerous times throughout. Potable water is defined in the 2010 California Plumbing Code as, "water that is satisfactory for drinking, culinary, and domestic purposes and that meets the requirements of the Health Authority Having Jurisdiction".

Comment [c4]: It was suggested that this minimum yield be changed to match the amount of water allowed for with a ministerial groundwater permit-0.6AF/yr or 535 gallons per day (0.3 gallons per minute). That will not work for a couple reasons: (1) this section deals with individual supplies for all areas of the county, not just the MST, and (2) this is a minimum yield not a limitation on use.

Comment [c5]: This section will be kept simple and will not discuss how yield tests shall be done. This will allow drillers to complete the drillers reports as they currently do. Separate guidance on what will be required for a yield test for residential and commercial (higher demand) projects as well as consideration of well location can be developed with driller input. This is similar to how other jurisdictions address in code.

13.04.060 - Compliance prerequisite to permit issuance.

The provisions of this division shall first be satisfied at applicant's expense, before the issuance of a building permit for any new dwelling unit.

(Ord. 1159 § 1 (part), 1999)

13.04.070 - Water storage tank requirement.

An individual water supply system having a sustained yield of at least one gallon but less than five gallons per minute shall have a water storage tank installed. Each storage tank shall have a minimum capacity of three thousand gallons for each dwelling unit. Each application for a permit shall be accompanied by a fee established by the board of supervisors. The installation of the water storage tank cannot be made until after the director approves the installation and issues a permit for the installation.

(Ord. 1159 § 1 (part), 1999)

(Ord. No. 1374, § 4, 9-11-2012)

13.04.080 - Resolution of conflicts with other regulations.

Nothing in this ~~division~~chapter is intended to supersede the requirements of any applicable uniform building code or other statute, ordinance or regulation of any agency of government having superior or concurrent jurisdiction. In case of discrepancy between the requirements of this division and any other applicable standards, the stricter standard shall be observed.

(Ord. 1159 § 1 (part), 1999)

Comment [c6]: Recommended by GRAC member, change division to chapter

13.04.090 - Use of abutting lots.

A. Nothing in this chapter shall be construed to prohibit the use of all or part of an abutting lot or lots to either:

1. Provide access through a sufficient legal easement to connect to an approved well and/or water supply system, when appropriate cause has first been established to the satisfaction of the administrative authority; or

2. Provide space through a sufficient legal easement for an approved water supply system or part thereof.

Comment [c7]: Corrected error related to sewer

B. "Legal easement," as used in this section, means easements and/or, where all parcels involved are in common ownership, contracts to convey easements upon severance of such ownership. Such easements and contracts shall be in a form approved by county counsel and shall be deemed effective for the purposes of this section only when recorded in the office of the Napa County Recorder.

Chapter 13.12 - WELLS*

Sections:

Article I. General Provisions and Definitions

13.12.010 - Purpose of provisions.
13.12.020 - Ad hoc advisory committees.
13.12.021 - Additives.
13.12.022 - Applicant.
13.12.030 - Annular space.
13.12.040 - AWWA.
13.12.050 - Bentonite clay.
13.12.051 - Cathodic protection well.
13.12.060 - Concrete.
13.12.070 - Contamination or pollution.
13.12.071 Department of Public Health
13.12.080 - Director.
13.12.081 - Exploratory hole (boring).
13.12.082 - Extraction well.
13.12.083 - Geothermal heat exchange well.
13.12.090 - Ground water.
13.12.091 - Hazard.
13.12.100 - Horizontal well.
13.12.101 - Injection well.
13.12.102 - Monitoring well.
13.12.110 - Neat cement.
13.12.115 – Pump contractor
13.12.120 - Sand-cement grout (or grout).
13.12.130 - Sanitary well seal.
13.12.140 - Sewage disposal system.
13.12.150 - Sewer line.
13.12.160 - Shallow water well.
13.12.170 - Spring.
13.12.180 - Surface water.
13.12.190 - Tremie.
13.12.200 - Vapor extraction well.
13.12.210 - Water well.
13.12.220 - Well.
13.12.230 - Well cover.

13.12.240 - Well destruction.
13.12.250 - Well drilling contractor.
13.12.251 - Well reconstruction.
13.12.253 – Well standards, state
13.12.260 - Permit requirements.
13.12.270 - Water wells—Classes of permits.
~~13.12.275 – Prohibition of wells that can be connected to existing sytems.~~
13.12.280 - Application requirements.
13.12.290 - Fees.
13.12.300 - Issuance conditions.
13.12.310 - Starting work without permit—Emergency work.
13.12.320 - Inspection of work required.
13.12.321 - Proper disposal of drilling fluids and soil cuttings.
13.12.330 - Materials and workmanship—Standards.
13.12.340 - Location—Distance from other facilities.
13.12.350 - Reserved.
13.12.360 - Protection of wells during construction.
13.12.370 - Casing specifications.
13.12.380 - Sealing of annular space.
13.12.390 - Access openings into well casings.
13.12.395 – Access opening for water level measurement.
13.12.400 - Well pits and below-ground discharge pipes.
13.12.410 - Disinfection requirements.
13.12.420 - Pump installation.
13.12.430 - Completion report—~~Driller~~Well drilling contractor responsibilities.
13.12.440 - Protection of water supply.
13.12.441 - Reconstruction of existing water wells.
13.12.460 - Abandoned wells.
13.12.480 - Destruction of wells.
~~13.12.490 – Alternative well or test hole destruction methods.~~

13.12.010 - Purpose of provisions.

This chapter is intended to regulate the drilling, construction, reconstruction, destruction, abandonment, maintenance and related activities, of all wells within the unincorporated portions of Napa County in such a manner that the groundwater or environment of the county will not be contaminated or polluted, for the protection of the public health, safety and welfare.

(Ord. 1194 § 3, 2002: Ord. 1159 § 1 (part), 1999)

13.12.020 - Ad hoc advisory committees.

The director may, as is necessary, convene ad hoc advisory committees for the purpose of gathering information relevant to the subject matter of this division. Said committees may be composed of members of the Napa Chapter of the California Groundwater Association, qualified technical professionals, members of the community and other persons/organizations that may, in the discretion of the director, provide the aforementioned information.

(Ord. 1159 § 1 (part), 1999)

(Ord. No. 1374, § 16, 9-11-2012)

13.12.021 - Additives.

"Additives" means quick-setting cement, retardants, hydrated lime (up to ten percent of the volume of the cement) and bentonite (up to five percent) used in neat cement, sand-cement grout or concrete.

(Ord. 1159 § 1 (part), 1999)

~~13.12.022 - Applicant.~~

~~"Applicant" means a licensed (State Contractor's C-57 license) well-drilling contractor who has been hired to perform the work on behalf of the legal property owner(s). A copy of such license, and when applicable, a current certificate of insurance for workers compensation must be on file with the director.~~

~~(Ord. 1159 § 1 (part), 1999)~~

~~(Ord. No. 1374, § 17, 9-11-2012)~~

13.12.030 - Annular space.

"Annular space" means the space between an excavation and the casing of a well or the space between two concentric casings.

(Ord. 1159 § 1 (part), 1999)

13.12.035 - Applicant.

"Applicant" means a licensed (State Contractor's C-57 license) well-drilling contractor who has been hired to perform the work on behalf of the legal property owner(s). A copy of such license, and when applicable, a current certificate of insurance for workers compensation must be on file with the director.

13.12.040 - AWWA.

"AWWA" means American Water Works Association.

(Ord. 1159 § 1 (part), 1999)

13.12.050 - Bentonite clay.

"Bentonite clay" means a commercially prepared powder, granular, pelletized or crushed sodium montmorillonite clay. The largest dimension of pellets or chips shall be less than one-fifth the thickness of the annular space into which they will be placed. Bentonite clay mixtures shall be composed of Bentonite

clay and clean water, thoroughly mixed before placement so that a uniform slurry is achieved. Bentonite clay materials are subject to approval by the director.

(Ord. 1159 § 1 (part), 1999)

(Ord. No. 1374, § 18, 9-11-2012)

13.12.051 - Cathodic protection well.

"Cathodic protection well" means any artificial excavation constructed by any method for the purpose of installing equipment or facilities to protect metallic objects in contact with the ground.

(Ord. 1159 § 1 (part), 1999)

13.12.060 - Concrete.

"Concrete" means Portland cement and aggregate mixed at a ratio of at least six ninety-four pound sacks of Portland cement per cubic yard of aggregate. In no case shall the size of the gravel in the aggregate be greater than one-fifth the radial thickness of the annular seal.

(Ord. 1159 § 1 (part), 1999)

13.12.070 - Contamination or pollution.

"Contamination" or "pollution" shall have the meanings ascribed to them in California Water Code Section 13050.

(Ord. 1159 § 1 (part), 1999)

13.12.071-Department of Public Health.

"Department of Public Health" means the state Department of Public Health, Drinking Water Program

13.12.080 - Director.

The term "director" as used in this chapter shall mean the director of planning, building, and environmental services, or the director's designees.

(Ord. 1159 § 1 (part), 1999)

(Ord. No. 1374, § 19, 9-11-2012)

Editor's note—

Ord. No. 1374, § 19, adopted Sept. 11, 2012, amended § 13.12.080 title to read as herein set out.
Former § 13.12.080 title pertained to environmental management director (director).

13.12.081 - Exploratory hole (boring).

"Exploratory hole (boring)" means an uncased temporary excavation whose purpose is the immediate determination of hydrologic or geologic conditions at a site.

(Ord. 1159 § 1 (part), 1999)

13.12.082 - Extraction well.

"Extraction well" means an artificial excavation constructed by any method for the purpose of removing groundwater to be used either for permanent dewatering or for the removal of ground water for cleanup of contamination.

(Ord. 1159 § 1 (part), 1999)

13.12.083 - Geothermal heat exchange well.

"Geothermal heat exchange well" (including ground source heat pump wells) means any artificial excavation by any method, that uses the heat exchange capacity of the earth for heating and cooling (such as for air conditioning units) in which excavation the ambient ground temperature is eighty-six degrees Fahrenheit (thirty degrees Celsius) or less. A closed loop fluid system may be incorporated in the design.

(Ord. 1159 § 1 (part), 1999)

13.12.090 - Ground water.

"Ground water" means water below the surface of the ground at a depth such that it has been protected from surface pollution or contamination by an impervious soil stratum, or which has received an acceptable degree of natural treatment by filtration through a considerable amount of soil as generally understood in industry standards.

(Ord. 1159 § 1 (part), 1999)

13.12.091 - Hazard.

"Hazard" means a well which threatens to, or which contaminates or pollutes the ground water in such a way that it jeopardizes the health and safety of the public. A hazard also means anything which creates an unsanitary or unsafe condition resulting from a well.

(Ord. 1159 § 1 (part), 1999)

13.12.100 - Horizontal well.

"Horizontal well" means a water well drilled horizontally or at an angle different from vertical.

(Ord. 1159 § 1 (part), 1999)

13.12.101 - Injection well.

"Injection well" means an artificial excavation constructed by any method for the purpose of introducing water, nutrient solutions, treated water, or reclaimed water into the ground as a means of replenishing groundwater basins, or enhancing recovery of chemical constituents, or establishing hydrologic control over local ground water.

(Ord. 1159 § 1 (part), 1999)

13.12.102 - Monitoring well.

"Monitoring well" means any artificial excavation by any method for the purpose of monitoring fluctuations in ground water levels, quality of underground waters, or the concentration of contaminants in

underground waters. For the purpose of this division, injection wells, vapor extraction wells and extraction wells for the purpose of removing ground water for the cleanup of contamination shall be considered monitoring wells.

(Ord. 1159 § 1 (part), 1999)

13.12.110 - Neat cement.

"Neat cement" means a mixture composed of one sack of Portland cement (ninety-four pounds) to not less than five nor more than seven gallons of water.

(Ord. 1159 § 1 (part), 1999)

13.12.115 - Pump contractor.

Pump contractor means a person who possesses a valid C-61 contractor's license and is certified to pull, repair, and reinstall well pumps in water wells.

13.12.120 - Sand-cement grout (or grout).

"Sand-cement grout" means a mixture composed of not more than two parts of sand and one part of Portland cement, and not less than five nor more than seven gallons of water per sack (ninety-four pounds) of cement.

(Ord. 1159 § 1 (part), 1999)

13.12.130 - Sanitary well seal.

"Sanitary well seal" means a device placed into the topmost part of a well casing which, by means of an expanding gasket, excludes foreign material from entering the well and may be provided with a means for introducing disinfecting agents directly into the well, or a device producing an equivalent effect. Such device shall be watertight to prevent the entrance of surface water and other contaminants into the well.

(Ord. 1159 § 1 (part), 1999)

13.12.140 - Sewage disposal system.

"Sewage disposal system" means a septic tank and subsurface disposal field or other type of system or appurtenance thereto, including sewage sump tanks and distribution boxes, whether individual, public or private, as defined in Chapter 13.16 of the Napa County Code, receiving domestic or industrial sewage waste. "Sewage disposal system" does not include a sewer line.

(Ord. 1159 § 1 (part), 1999)

13.12.150 - Sewer line.

"Sewer line" means a line conveying sewage waste matter from any building or premises to a point of disposal, such as to a septic tank or sewage treatment or disposal plant.

(Ord. 1159 § 1 (part), 1999)

13.12.160 - Shallow water well.

"Shallow water well" means any water well thirty feet or less in depth.

(Ord. 1159 § 1 (part), 1999)

13.12.170 - Spring.

"Spring" means a naturally occurring flow of ground water reaching the surface of the ground which may be developed as a water supply system.

(Ord. 1159 § 1 (part), 1999)

13.12.180 - Surface water.

A. "Surface water" means all those waters found on or immediately below the surface of the ground and that have not been filtered through any considerable amount of soil, ~~as defined by industry standards, and which normally do not meet California drinking water standards~~ and are not protected so as to exclude real or potential sanitary hazards.

B. Any groundwater determined to be under the influence of surface water, according to regulations of the state Department of Public Health, Drinking Water Program Title 22, Division 4, Chapter 17, shall for the purposes of this ordinance be considered surface water and as such shall be provided with treatment as required.

C. In the event that a conflict of opinion arises as to whether or not any waters are "surface waters," within the meaning of this division, the burden and expense of proving that such waters are not surface waters shall be upon the person or persons making such claim, and in the absence of findings to the contrary, the opinion and/or findings of the director shall be final.

(Ord. 1159 § 1 (part), 1999)

Comment [c8]: There was an issue with the word quality in prior revision. Reworded as suggested by consultant.

13.12.190 - Tremie.

"Tremie" means a tubular device or pipe used to place the sealant in the annular space.

(Ord. 1159 § 1 (part), 1999)

13.12.200 - Vapor extraction well.

"Vapor extraction well" means an artificial excavation constructed by any method for the purpose of injection, monitoring or extraction of vapors, into or from the predominantly unsaturated zone above the water table.

(Ord. 1159 § 1 (part), 1999)

13.12.210 - Water well.

"Water well" means any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into, the ground. This definition shall not include the following: (1) oil and gas wells; (2) geothermal wells constructed under the jurisdiction of the California Department of Conservation (except those wells converted to use as water wells) or (3) wells used for the purpose of dewatering excavations during construction, or stabilizing hillsides or earth embankments.

(Ord. 1159 § 1 (part), 1999)

13.12.220 - Well.

"Well" shall mean any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into, the ground. In addition, for the purpose of this division, the following structures are also defined as wells: abandoned wells, geothermal heat exchange wells (pumps), cathodic protection wells, exploratory holes (borings), extraction wells, horizontal wells, injection wells, monitoring wells, vapor extraction wells and water wells.

(Ord. 1159 § 1 (part), 1999)

13.12.230 - Well cover.

"Well cover" means a temporary device to cover the topmost part of a well casing. The device must be so constructed to be structurally sound, impervious, and prevent the entrance of foreign material.

(Ord. 1159 § 1 (part), 1999)

13.12.240 - Well destruction.

"Well destruction" means certain work done to an existing well, the intent of which is to effectively seal the entire well up to the ground surface, in such a manner that each intersected water stratum is sealed and isolated from every other stratum and from surface water. Destruction of wells shall be completed in accordance with the procedures outlined in Article IV of this division, or as otherwise specified by the director.

(Ord. 1159 § 1 (part), 1999)

13.12.250 - Well drilling contractor.

"Well drilling contractor" means a person who possesses a valid C-57 contractor's license in accordance with the provisions of the California Business and Professions Code, Section 7000, et. seq. and Water Code Section 13750.5.

(Ord. 1159 § 1 (part), 1999)

13.12.251 - Well reconstruction.

"Well reconstruction" means certain work done to an existing water well in order to restore its production, replace defective casing, seal off certain strata or surface water, or similar work. Well reconstruction does not include the cleaning out of sediments, surging or work related to a well's pump.

(Ord. 1159 § 1 (part), 1999)

13.12.253 - Well standards, state

State well standards means Water Well Standards of the California Department of Water Resources Bulletin 74-81, ~~and~~ 74-90, and subsequent supplements and revisions thereto, combined.

Article II. Permits and Inspection

13.12.260 - Permit requirements.

No construction, destruction or reconstruction of any well shall be commenced on any property until a permit to do such work has first been obtained from the director, except in the event of an emergency as set forth in Section 13.12.310.

(Ord. 1159 § 1 (part), 1999)

13.12.270 - Water wells—Classes of permits.

There shall be five types of water well permits, namely Class IA, Class IB, Class II, well reconstruction and well destruction.

A. Class IA permits shall be obtained for the installation of a water well where such well location conforms with the minimum distances set forth in Section 13.12.340, and where the director deems no conditions exist which may result in a pollution or contamination of the ground water.

B. Class IB permits shall be obtained for the installation of a new or replacement water well when such well is or will be the sole source of water supply and the well location is closer than the minimum distances set forth in Section 13.12.340, or where the director deems conditions exist which may result in contamination or pollution of the ground water unless special construction features are included in the well construction. A Class IB well permit shall not be issued unless there exists on a parcel an existing constraint which prohibits the construction of a Class IA well. At a minimum, special construction features shall include the following:

1. An annular seal having a minimum thickness of three inches.
2. An annular seal having a minimum depth of fifty feet or into the first impervious layer, whichever is greater.
3. The sealing material to be placed in the annular space by means of a tremie pipe, so as to fill the annular space from the bottom.
4. The well log must be made available to the director prior to sealing the annular space.
5. Different and/or additional standards from subsections (1) through (4) above may imposed by the director if the proposed well is to be located in close proximity to a potential source of contamination. Such standards will be conditioned on the construction permit.

In no case shall a Class IB well permit be issued when the distance to any part of a sewage disposal system is less than fifty feet.

C. Class II permits may be issued for replacement wells serving existing residential structures if it is determined by the director that special circumstances exist whereby the criteria for a Class IB permit cannot be met due to existing constraints on the property. Special construction requirements as determined by the director will be imposed.

D. Reconstruction permits shall be obtained for any well reconstruction work.

E. Destruction permits shall be obtained for any well destruction work.

(Ord. 1159 § 1 (part), 1999)

(Ord. No. 1374, § 20, 9-11-2012)

13.12.280 - Application requirements.

A. Any person legally entitled, as defined in Section 13.12.300, to apply for and receive a permit shall make such application on forms provided for that purpose. Such person shall give a description of the character of the work proposed to be done, and the location and ownership of the job site. The director may require plans, specifications or drawings and such other information as deemed

necessary, including but not limited to, all improvements on the parcel, and the location of sewage disposal systems and sewer lines on all adjoining parcels.

If a proposed well is to be located in a floodway, floodplain, or riparian zone as defined in the Napa County Code (Sections 16.04.250, 16.04.290, and 16.04.410), no permit to construct a well shall be issued until a permit has been obtained from Napa County public works department. The well and related equipment including the pressure tank, electrical box, air vent and other devices shall be constructed in such a manner as to prevent the entrance of flood waters into the well or related equipment.

B. If the director determines that the plans, specifications, drawings, descriptions or information furnished by the applicant are in compliance with this chapter and other applicable requirements, said director shall issue the permit applied for upon payment of the required fee, as hereinafter fixed.

C. All well permits shall be valid for a period of two years from the date of issue. The director, upon notification to the property owner, may enforce the same expiration deadlines as noted above on well permits issued prior to the effective date of this ordinance.

(Ord. 1159 § 1 (part), 1999)

13.12.290 - Fees.

Applications for a permit for well installation, reconstruction or destruction shall be accompanied by that fee established by resolution of the board of supervisors.

(Ord. 1159 § 1 (part), 1999)

13.12.300 - Issuance conditions.

No permit shall be issued to construct, reconstruct or destroy a well except to a licensed well-drilling contractor ~~(or an authorized agent)~~, as defined in Section 13.12.250 of this division.

(Ord. 1159 § 1 (part), 1999)

13.12.310 - Starting work without permit—Emergency work.

Any person who commences any work for which a permit is required by this division without first having obtained a permit therefor shall, if subsequently allowed to obtain a permit, pay double the permit fee for such work; provided, however, that this provision shall not apply to emergency work when proved to the satisfaction of the director that such work was urgent and necessary and that it was not practical to obtain a permit before commencement of the work. In all cases where such work was determined by the director to be an emergency, a permit must be obtained as soon as it is possible to do so, and if there is an unreasonable delay, as determined by the director, in obtaining such permit, a double fee as herein provided shall be charged.

(Ord. 1159 § 1 (part), 1999)

13.12.320 - Inspection of work required.

All wells for which a permit has been obtained may be inspected by the director to insure compliance with all the requirements of this division.

(Ord. 1159 § 1 (part), 1999)

13.12.321 - Proper disposal of drilling fluids and soil cuttings.

The applicant is required to see that safe and appropriate measures are taken in the handling and disposal of drilling fluids, soil cuttings, and other materials used or generated in connection with the permitted work. All drilling wastes must be controlled so as not to create conditions which violate applicable local, state and federal laws and regulations. Discharge of drilling wastes into the sanitary sewer or storm drain is prohibited unless authorized by the director. This provision does not modify the measures for proper handling, storage, and disposal of hazardous waste set forth in the California Health and Safety Code, Division 20, Chapter 6.5 and by the California Code of Regulations, Title 22, Division 4.5. In addition, mud pits created to confine drilling fluids shall be maintained during the well drilling operation so as not to be a nuisance. It shall be the applicant's responsibility to see that the mud pit is properly evacuated, or backfilled, or both, upon completion of the job.

(Ord. 1159 § 1 (part), 1999)

Article III. Construction Specifications

13.12.330 - Materials and workmanship—Standards.

All materials and workmanship shall be no less than the quality specified in this division. ~~The requirements of these standards are minimal only, and any material or method determined by the director to give equivalent or better results may be required.~~ Materials or methods not covered by these standards must meet ~~the standards of the California~~state Water Well Standards ~~Bulletin 74-81 and the supplement thereto, bulletin 74-90,~~ and must receive ~~the written~~ approval from the director prior to use. In the event of conflicting or contradictory requirements, the director shall determine the appropriate standards according to the specific case. ~~the provisions of this division shall prevail. Except as otherwise contradictory, t~~The California Water Well Standards Bulletin 74-81 and 74-90 and any subsequent supplements and revisions thereto are hereby incorporated by reference.

(Ord. 1159 § 1 (part), 1999)

13.12.340 - Location—Distance from other facilities.

A. All water wells, geothermal heat exchange wells, extraction wells for the purpose of permanent dewatering, and horizontal wells shall be located as follows:

Minimum Distances	
From property line	5 feet
From septic tank and/or any portion of a sewage disposal system or sewage disposal system expansion area [1]	100 feet
From public or private approved sewer line of watertight construction [2]	25 feet
From a public or private road	See Napa County Code Chapter 18.112
From floodway, floodplain, or riparian zone	See Section 13.12.280

Comment [c9]: Left setback as is currently written in code

From any type of post construction stormwater treatment control (ie. bio-swale or subsurface detention system)	50 feet

Comment [c10]: Removed the setback to underground piping- the intent was to regulate setback to the storm water post construction control features, not sub-drains.

1. Minimum distance may be reduced if conditions are met for Class 1B or Class II wells as listed in Section 13.12.270. Every effort shall be made to install the well in a location with the greatest possible setback distance.
2. Shall be fifty (50) feet if sewer line is not constructed of approved building sewer materials.

As determined by the director, special setback distances may be required when the above wells are located near the following: regulated or unregulated underground fuel or storage tanks, contaminated sites, sanitary landfills and large scale animal or fowl operations.

B. Monitoring and cathodic protection wells, and exploratory borings shall maintain setbacks from potential sources of contamination as approved by the director. Such setbacks shall be dependent on the source of contamination, the depth of the monitoring or cathodic protection well, the depth and type of the annular seal, the formations which are penetrated, and the proposed usage.

(Ord. 1159 § 1 (part), 1999)

(Ord. No. 1374, § 21, 9-11-2012)

13.12.350 - Reserved.

Editor's note—

Ord. No. 1374, § 22, adopted Sept. 11, 2012, repealed § 13.12.350, which pertained to locations—exemptions and derived from Ord. No. 1159, § 1 (part), adopted 1999.

13.12.360 - Protection of wells during construction.

At all times during the progress of the work, or whenever there is an interruption in work on a well, the well shall be protected to prevent ground water contamination.

(Ord. 1159 § 1 (part), 1999)

13.12.370 - Casing specifications.

A. All materials used for well casings shall be approved by the director and shall be structurally capable to perform the functions for which it is designed; i.e., to maintain the hole by preventing its walls from collapsing, to provide a channel for conveyance of the water, and to provide a measure of protection of the quality of the water pumped.

B. All casings shall be placed with sufficient care to avoid damage to casing sections or joints.

C. The casing shall extend at least eight inches above the ground surface, and at least two inches above the surface of any surrounding concrete slab, or as determined by the director.

(Ord. 1159 § 1 (part), 1999)

13.12.380 - Sealing of annular space.

A. The annular space of Class IA wells shall be filled with acceptable sealant having a minimum thickness of two inches.

B. The sealing material shall consist of neat cement, sand-cement grout, bentonite clay, concrete or a mixture of such approved by the director. Used drillers' mud, cuttings or chips from drilling shall not be used as sealing material.

C. The sealing material shall extend from two inches above the ground surface to at least twenty feet below the ground surface, or at least two feet into impervious soil, whichever is the greater, except in the case of shallow water wells where no water-bearing stratum is encountered below twenty feet, the seal shall extend to a minimum depth of ten feet, and except for water wells which will serve a public water system, the seal shall extend to a minimum depth of fifty feet or two feet into impervious soil, whichever is greater. If bentonite clay is used, the uppermost three feet of the annular space must be neat cement, sand-cement grout, or concrete and shall be placed only after the bentonite has had sufficient time to settle. The requirements of this subsection do not apply to monitoring wells, cathodic protection wells and exploratory holes.

D. For monitoring wells, cathodic protection wells and exploratory holes, refer to ~~Bulletin 74-90~~ State Well Standards for grouting requirements.

E. The grout shall be applied in one continuous process either by pressure or by gravity in such a manner as to exclude surface and other undesirable water from the well. Sealing material shall be placed by methods (such as the use of a tremie pipe or equivalent) that prevent bridging or dilution of the sealing material or separation of sand or aggregate from the sealing material. Annular sealing materials shall not be installed by freefall unless the interval to be sealed is dry and no deeper than thirty feet below the ground surface.

F. Prior to grouting the annular space, a bentonite clay seal consisting of pellets or other approved material may be placed at the bottom of the annular space.

(Ord. 1159 § 1 (part), 1999)

13.12.390 - Access openings into well casings.

Access openings into the well casing for air release, disinfection and any other purpose necessary for maintenance and operation of the well are permitted, but must have a watertight seal.

(Ord. 1159 § 1 (part), 1999)

13.12.395 - Access opening for water level measurement.

A sounding pipe or tap hole with plug shall be installed on the finished wellhead to permit access for water level measurements.

13.12.400 - Well pits and below-ground discharge pipes.

A. Well pits or below-ground discharge pipes may be permitted only when determined to be absolutely necessary by the director. Where the well casing terminates in a pit below the ground surface, the pit shall be constructed of monolithic, reinforced concrete, watertight in all respects. The top of such pit shall be covered with a concrete slab or equal material, or with a housing of satisfactory construction. The casing shall extend at least eight inches above the pit floor. The well pit shall be so constructed

and protected so that flood, rain or surface waters cannot enter the pit. Additional requirements may be imposed where it is determined necessary by the director.

B. The pit shall be provided with a drainage sump and an automatic sump pump and audio type alarm (or, if topography permits, a "free" discharge protected against entrance of rodents, insects or flooding). The discharge from the sump pump shall not be connected to any sewer or pipe drain. Pits shall have easy access for proper operation, maintenance and inspection of the equipment, and shall have a locked hatch. Doorways or hatches shall at all times effectively keep water out of the pit.

(Ord. 1159 § 1 (part), 1999)

13.12.410 - Disinfection requirements.

Newly constructed or repaired water wells shall be adequately treated in such a manner as to disinfect all parts of the well before or as the pump is set, with chlorine or an equal disinfecting chemical, to a strength of at least fifty parts per million of available chlorine, but not more than two-hundred parts per million, and held for at least eight hours, after which time the well shall be pumped to reduce the disinfecting chemical to a safe level.

(Ord. 1159 § 1 (part), 1999)

13.12.420 - Pump installation.

All pumps shall be installed by a licensed well drilling or pump contractor. Pumps shall be installed so as to prevent contamination of the ground water supply by surface water or other contaminants. The pump shall be mounted through a sanitary well seal. There shall be an access opening for introduction of chlorine into the well and gravel pack.

(Ord. 1159 § 1 (part), 1999)

13.12.430 - Completion report—~~Driller~~Well drilling contractor responsibilities.

Upon completion of a well, the well drilling contractor~~driller~~ shall be responsible for the placing of a sanitary well seal, or if the pump is not installed immediately, a watertight and tamper-proof well cover shall be installed. The well drilling contractor~~driller~~ shall submit a report of completion within the time frame required by state law, made out in detail on the State Department of Water Resources reporting form to the director. The well application will not be closed until a satisfactorily completed reporting form is submitted to the director.

(Ord. 1159 § 1 (part), 1999)

13.12.440 - Protection of water supply.

A. No person shall install or maintain a well in any manner that will result in the pollution or contamination of the ground water, or which allows the entrance of surface waters into the ground water.

B. If evidence is presented to the satisfaction of the director that any existing well is polluting or contaminating the ground water, the director shall require that such well be destroyed in accordance with the provisions of this division, or repairs be made to such well to eliminate the pollution or contamination or the entrance of surface water into the ground water.

C. At a minimum, all water wells must be provided with a sanitary well seal. In circumstances where chemicals or other deleterious materials are injected into the water system, as a minimum an approved reduced pressure principle device or an approved air gap must also be provided at the well head.

D. In the case of a flowing artesian well, the well head shall be sealed and vented to prevent the continuous discharge of well water on to the surface of the ground.

(Ord. 1159 § 1 (part), 1999)

13.12.441 - Reconstruction of existing water wells.

A. In no case shall a reconstruction permit be issued for a water well where a sewage disposal system is located less than fifty feet away. For additional information regarding this matter, refer to Section 13.12.270(C) for Class II wells.

B. If a water well is located greater than one hundred feet to a sewage disposal system, a reconstruction permit may be issued provided all efforts are made to meet the construction requirements of a Class IA well. If a well is located between fifty and one hundred feet from a sewage disposal system, a reconstruction permit may be issued if all efforts are made to meet the construction requirements for a Class IB well.

(Ord. 1159 § 1 (part), 1999)

Article IV. Destruction of Abandoned Wells

13.12.460 - Abandoned wells.

A. The owner of any property shall be responsible for destroying any abandoned well located thereon. A well is considered to be abandoned when it has not been connected for service to any structure and/or not used for a period of one year. An abandoned well also includes a well which is in such a state of disrepair that no water can be produced.

B. The well will not be considered abandoned if all of the following occur: (1) the owner declares his or her intention to the director, in writing, to use such well again for supplying water or for other approved purposes, (2) the well has no defects in construction which would cause pollution or contamination to the ground water by surface water, (3) the well is covered with a safe well cover, (4) the well is marked so as to be clearly seen, and (5) the ground area surrounding the well is sloped away from the casing and kept clear of brush and debris.

(Ord. 1159 § 1 (part), 1999)

13.12.480 - Destruction of wells.

A. Prior to destroying a well, a detailed ~~evaluation and report on the well~~work plan complying with Napa County Well Destruction Guidelines incorporated by reference herein, shall be submitted to the director by a licensed ~~well driller~~well drilling contractor (as defined in Section 13.12.250). Such ~~report~~work plan shall indicate the type of well to be sealed, all known information of the geological conditions existing in the well~~of the soil~~, and the methods and material to be used in the destroying and sealing process. The methods and materials used in destroying wells shall be such that the ground water is protected from pollution or contamination. The well shall be destroyed per the approved work plan.

~~B. When a water well or an abandoned water well is to be destroyed, it shall be destroyed as follows:~~

~~1. Any obstructions in said well, including pipes, pump, etc. shall be removed when possible.~~

~~2. As much casing shall be removed as possible, but not less than three feet below grade or as determined by the director.~~

~~3. The well shall be filled with concrete, or "p" gravel to thirty feet or below the first impervious layer (if known), whichever is deeper. If the well is less than thirty feet deep, proceed to step 4.~~

~~4. Fill well with concrete, neat cement or sand cement grout to surface.~~

~~5. The placement of the material shall be done in such a way as to assure a dense seal, free of voids, in order to exclude surface water. Gravity installation of sealant without the aid of a tremie or grout pipe shall not be used unless the interval to be sealed is dry.~~

~~C~~B. For the destruction of monitoring wells, cathodic protection wells or exploratory holes, refer to State Well Standards~~Bulletin 74-90 for requirements~~.

(Ord. 1159 § 1 (part), 1999)

~~13.12.490 - Alternative well or test hole destruction methods.~~

~~Other methods of destroying wells, including large diameter wells and wells considered to pose a higher degree of risk to the ground water, may be approved by the director if in his opinion an equivalent effect will result, and no contamination or pollution to the ground water will occur.~~

~~(Ord. 1159 § 1 (part), 1999)~~

Chapter 13.15 - GROUNDWATER CONSERVATION*

Sections:

13.15.010 - Title, purpose and definitions.

13.15.020 - Groundwater permit required.

13.15.030 - Classification of applications.

13.15.035 – Applicability of water conservation regulations for landscape design.

13.15.040 - Agricultural activities exempt from groundwater permitting requirements.

13.15.050 - Application for determination of exemption.

13.15.060 - Application for groundwater permit.

13.15.070 - Processing of groundwater permit applications.

13.15.075 – Permit required for export for use outside the county.

13.15.080 - Exceptions.

13.15.090 - Appeals.

13.15.100 - Enforcement—Violation.

13.15.010 - Title, purpose and definitions.

A. Title. This chapter implements the Napa County Groundwater Conservation Ordinance.

B. Purpose. This chapter is intended to regulate, to the maximum extent possible, the extraction and use of groundwater resources in Napa County and to prohibit extraction for wasteful, unreasonable or non-beneficial purposes in order to promote groundwater conservation and the use of Best Management Practices and maximize the long-term beneficial use of the county's groundwater resources, thus serving to enhance environmental quality and protect the public health, safety and welfare of the citizens of Napa County.

C. Definitions. For the purpose of this chapter, the following definitions shall apply:

"Agricultural land development" means the development, new plantings, or other improvement of a property greater than one-quarter of an acre for the purposes of farming a crop, orchard, vineyard or other agricultural product.

"Agricultural land re-development" means the re-development or replanting of an existing crop, orchard, vineyard or other agricultural product of greater than one-quarter of an acre.

"Aquifer" means a geologic formation, underground layers of porous rock that are saturated from above or from structures sloping toward it, that stores, transmits and yields significant quantities of water to wells and springs. ~~Aquifer capacity is determined by the porosity of the subsurface material and its area.~~

"Best Management Practices (BMP)," as used in this chapter, means structural, nonstructural and managerial techniques generally recognized to be the most effective and practical means to reduce contamination and consumption of groundwater while still allowing productive use of the resource, including, but not limited to: low flow fixtures, drip in lieu of broadcast irrigation, irrigation during hours of least evaporation loss, timers on irrigation systems, use of pool and spa covers to reduce evaporation, use of xeriscape landscaping, use of recycled water for landscaping purposes, and monitoring of wells.

"Conservation" means the conscious effort to prevent waste and minimize the consumption of groundwater by utilizing reasonable and economically justifiable methods to improve its delivery and use, thus increasing water supplies for optimum long-term benefits. When referring to landscaping or

agricultural uses of groundwater this term includes water reuse, processes to reduce the amount of water irretrievably lost to moisture deficient soils, water surface evaporation, or evapotranspiration.

"Contiguous parcel" means parcels which abut, adjoin or otherwise touch each other at more than one point along a common boundary or which would do so except for separation by a strip of land over which some person or entity, other than the owner of the parcels, has some property interest, including fee title or some lesser interest, such as a leasehold or easement. Examples of such strips of land include but are not limited to roads, streets, utility easements, railroad rights-of-way, canals and drainage channels.

"Convenience improvement" means an addition, change, upgrade, improvement or replacement of a site's existing well or water supply and distribution system (including the addition of plumbing fixtures) which is for purposes of rendering the system more efficient and is not intended to supply water or make plumbing fixtures available to additional users of said system and does not increase the total consumption of groundwater at that site. If a replacement well is permitted, the existing well must be destroyed under permit by the department and the new well must be drilled to the same or smaller diameter as the existing well.

"Department" means the county department of planning, building, and environmental services.

"Director" means the county director of planning, building, and environmental services or the designee of the director.

"Director of public works" means the county director of public works or the designee of the director of public works.

"Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

"Evapotranspiration" means the loss of water from the soil through both evaporation and transpiration from plants.

"Graywater" means domestic wastewater other than that containing human excrete such as sink drainage, washing machine discharge or bathwater.

"Groundwater" means all water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water.

"Groundwater deficient area" means an area where the amount of groundwater is inadequate to meet particular demands at a particular time, as shown in Map 13-1 at the end of this chapter.

"Groundwater permit" means a permit issued pursuant to this chapter to use groundwater.

"Harvested water" means the collection and use of rainwater as a means to augment or replace other sources of water.

"Improvement" or "improve," as related to a well or water supply system, means the construction, re-construction, replacement, or addition to, any portion of a water supply and distribution system for the purposes of providing water for a new use or an additional use (unless specifically exempt under this chapter). This definition is not intended to include simple plumbing repairs to existing fixtures, pipes or equipment such as replacing or repairing existing faucets, hoses, drains, sinks, toilets, tubs, showers, washing machines, swimming pool and spa filter pumps, irrigation equipment, and the like, unless such repair or replacement will potentially increase the rate and/or amount of groundwater extraction.

"Minor improvement" means a modification to an existing water supply that involves simple repair or replacement of pipes, fittings, faucets, hoses, pumps, meters, components of irrigation systems, sinks, tubs, toilets, showers, washing machines, and all other elements of the water supply and delivery system that will not potentially increase the amount of groundwater extraction at that site. For the purposes of this definition, swimming pools (if filled with trucked in water from a supply source that does not include groundwater from a groundwater deficient area and is provided with a cover), replacement dwellings (when an existing legal dwelling unit had previously existed on the property), ~~and~~ additional potential bedrooms whether or not attached to the single-family dwelling unit and cottage food operations as

allowed by State Law are considered minor improvements. Any modification or improvement that will increase the amount of groundwater extracted is not a minor improvement.

"Overdraft" means the withdrawal of water from an aquifer in excess of the amount of water that recharges the basin over a period of years during which water supply conditions approximate the average, and which, if continued over time, could eventually cause the underground supply to be exhausted, cause subsidence, cause the water table to drop below economically feasible pumping lifts, cause a detrimental change in water quality, or produce other adverse environmental impacts.

"Parcel" means a legal lot of record.

"Potential bedroom" means any room with a floor area equal to or greater than seventy square feet, including lofts, sewing rooms, offices, game rooms, etc., that meet building codes for a sleeping room. A closet or lack thereof is not used in determining whether a room is a potential bedroom.

"Public water supply" means a water supply provided by a local agency, publicly owned corporation, or approved utility company.

"Recharge" means replenishment of groundwater by flows to groundwater storage from precipitation, irrigation, infiltration from streams, a spreading basin or other sources of water.

"Recycled water" means the reclamation and reuse of wastewater or graywater for beneficial use.

"Single-family dwelling unit" means a dwelling unit containing not more than one kitchen, designed to be occupied by not more than one family, and includes a manufactured home as defined in Section 18.08.360 which is installed on a permanent foundation and certified under the National Manufactured Housing Construction and Safety Standards Act of 1974.

"Site" means the location of a system to extract and distribute groundwater, such as a well and connecting plumbing which supplies water to a residence or other structure or use.

"Subsidence" means lowering or sinking of the land surface as a result of the extraction of groundwater.

"Transpiration" means the process by which water absorbed by plants (usually through the roots) is evaporated into the atmosphere from the plant surface.

"Water conservation regulations for landscape design" means the most current regulations in effect that are employed by the County to comply with state requirement to adopt a water efficient landscape ordinance.

"Water supply system" means any system including the water source the purpose of which is to extract and distribute groundwater.

"Water table" means the surface or level where groundwater is encountered in an unconfined aquifer.

"Xeriscaping" means a form of landscaping that uses a variety of indigenous and drought-tolerant plants, shrubs and ground cover to provide environmental benefits.

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

(Ord. No. 1374, § 23, 9-11-2012)

13.15.020 - Groundwater permit required.

A. No applications filed pursuant to Division I (Water) of this title for development of a new water system or improvement of an existing water system within Napa County that may use groundwater as a water source shall be approved by any employee, department or body of Napa County unless it is specifically exempted by this chapter or unless a groundwater permit is obtained as required by this chapter.

B. Prior to the issuance of a building permit pursuant to Section 15.08.040, or any other permit or administrative approval facilitating the development or use of any parcel that may utilize a groundwater supply, a groundwater permit must be obtained unless specifically exempted by this chapter.

C. Prior to the final approval of a subdivision, a groundwater permit must be obtained if required by this chapter and an existing, new or improved water system will provide groundwater to the subdivision.

D. No application filed pursuant to Chapter 18.108 (Conservation Regulations) shall be approved by any employee, department or body of Napa County until the applicant has obtained a groundwater permit if required by this chapter.

E. Agricultural land development or re-development that is located on parcels included within those groundwater deficient areas depicted on Map 13-1 which will utilize groundwater and which is not subject to the requirements of subsection (D) of this section or Chapter 18.108 is subject to review and approval by Napa County in the form of a groundwater permit.

F. No application filed pursuant to Chapter 17.46 (Lot Line Adjustments) shall be approved by any employee, department or body of Napa County when the resultant parcel configuration increases the intensity of groundwater use of any parcel unless specifically exempted by this chapter.

G. A groundwater permit shall be waived if a new water using activity or use on a parcel will be supported by water from an outside source and will not utilize groundwater. The property owner shall, register with the department on a form provided by the director and shall indicate the project for which the hauled in water will be used, and a site plan showing the proposed improvements including the water storage tank(s). ;If and when requested by the county, the property owner shall provide evidence that such an outside source of water is actually available and being used.

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

Comment [c11]: GRAC suggestion, remove comma after shall

13.15.030 - Classification of applications.

Applications described in Section 13.15.020 shall be classified as follows for the purpose of determining whether a groundwater permit is required by this chapter:

A. Applications Exempt from Groundwater Permit Requirement.

1. In the case of uses permitted without a use permit under any provision of this code, the applications or development set forth in Section 13.15.020 are exempt from the requirement that a groundwater permit must be obtained unless the application or development:

   a. Is for a project located on a parcel included within those groundwater deficient areas depicted on Map 13-1 and is not otherwise specifically exempted;

   b. Is to develop or improve an on-site or off-site water supply serving more than a single contiguous parcel; or

   c. Where the development or improvement, regardless of the number of parcels served, is able to connect to a public water supply.

2. Applications to develop or improve an on-site or off-site water source serving agriculture are also exempt from the requirement of a groundwater permit under this chapter to the extent provided in Section 13.15.040

3. Applications to construct or develop rainwater harvesting or graywater recycling systems when that is the sole purpose of the project and the resulting harvested or recycled water will be used to augment existing groundwater sources or as the sole source of water for use at that site.

4. Minor improvements to a water system.

5. Convenience improvements to a water system.

B. Applications Requiring Use Permits. In the case of a proposed development requiring the issuance of a use permit pursuant to any provision of this code, applications which propose to develop, improve or utilize an on or off-parcel groundwater source in conjunction with such development are not required to obtain a groundwater permit under this chapter. Groundwater review of such applications shall occur in accordance with the county's procedures to obtain a use permit.

C. Applications Involving a Ministerial Approval.

1. Applications for a single-family dwelling unit and associated landscaping on parcels two acres in size or less, when such residence will be the only use on the parcel, shall be issued a groundwater permit providing they install a meter on the well serving the parcel, read the meter every six months, and report these meter readings to the public works department when requested by that department. If the parcel is greater than two acres, a ministerial permit shall be issued providing they meet the following requirements:

   a. The permittee shall install a meter on the well serving the parcel to measure all groundwater used on the parcel. The configuration of the installation shall conform to a drawing prepared by the permittee and shall conform to the technical standards set forth by the director of public works.

   b. On or near the first day of each month the permittee shall read the water meter and provide this data to the director of public works during the first week of April and October of each year. The permittee shall also grant to the director of public works the right to access and verify the operation and readings of the meters and well levels at any reasonable time during regular working hours.

   c. The permittee shall be limited to 0.60 acre feet of water per year or such other amount as may be adopted by the board by resolution.

   d. The permittee shall provide access to the County to measure water levels in spring and fall of each year, if requested.

   This groundwater permit shall not be available when other dwellings, accessory uses, agricultural development or other discretionary uses exist on the property or when water from an approved public water system is available to the property. In such cases, a groundwater permit must first be obtained pursuant to the procedures set forth in Section 13.15.060 et seq. Any permittee that qualifies for a groundwater permit issued pursuant to this section may instead apply for a groundwater permit pursuant to the procedures set forth in Section 13.15.060 et seq.

2. Applications for agricultural land redevelopment that will utilize groundwater on parcels included within those groundwater deficient areas depicted on Map 13-1 shall be issued a groundwater permit without any additional requirements providing the size of the replant is two acres in size or less. If the replant is greater than two acres, a ministerial permit will be issued providing that they meet the following requirements:

   a. The permittee shall install a meter on all wells or water supply and distribution systems serving the parcel to measure all groundwater used on the parcel. The configuration of the installation shall conform to a drawing prepared by the permittee and shall conform to the technical standards set forth by the director of public works.

   b. On or near the first day of each month the permittee shall read the water meter and provide this data to the director of public works by the 15th of each month ~~during the first week of April and October of each year.~~ The permittee shall also grant to the director of public works the right to access and verify the operation and readings of the meters and well levels at any reasonable time during regular working hours.

c. The permittee shall be limited to an average of 0.30 of acre feet of water per acre per year or such amount as may adopted by the board by resolution. This limitation shall be calculated as the average water used over a three-year period with no yearly use exceeding the acre foot of water per acre per year allotment by more than fifteen percent.

d. The permittee shall provide access to the County to measure water levels in spring and fall of each year, if requested.

Any permittee that qualifies for a groundwater permit issued pursuant to this section may instead apply for a groundwater permit pursuant to the procedures set forth in Section 13.15.060 et seq.

D. Applications for a minor modification or cancellation of an existing groundwater permit.

1. Applications for a minor modification or a cancellation of an existing groundwater permit shall be made through a ministerial permit process.

2. Applications for a minor modification or cancellation of an existing groundwater permit shall be made to the department in writing on a form prescribed by the department. The application shall state the grounds for the application, the specific modification being requested and shall include any information or evidence needed to support the request. The application shall also demonstrate that the proposed use complies with the standards required for issuance of a groundwater permit as set forth in this chapter.

3. An application for an administrative permit for a minor modification or cancellation of an existing groundwater permit shall be accompanied by a fee in the amount established by resolution of the board of supervisors.

4. Issuance Prerequisites. An application for a minor modification or cancellation of an existing groundwater permit shall be considered only if the following standards are met:

a. Minor Modification. The proposed modification does not increase water use over the existing permitted use and the resultant water use request meets the fair share standard for the parcel as established in the Department of Public Works Water Availability Policy Report (even if the original permit allowed a higher water use) and the application does not request a modification to a ministerial permit that would have otherwise been processed through the groundwater permit process outlined in Section 13.15.060; or

b. Cancellation. The cancellation of a groundwater permit shall only be allowed if evidence is submitted that the project which triggered the groundwater permit has been cancelled and is no longer being pursued.

If the modification request is not able to meet the above standards, the applicant has the option of applying for a new groundwater permit pursuant to Section 13.15.060.

(Ord. 1294 § 1 (part), 2007: Ord. 1254 § 7, 2005: Ord. 1230 § 3, 2003)

13.15.035 – Applicability of water conservation regulations for landscape design.

Applications for projects subject to the State's water efficient landscape requirements shall include information sufficient to demonstrate compliance with those requirements.

Comment [c12]: Refer to Section 18.118 of Napa County Code. Public agency projects and private development projects requiring discretionary approval must meet the requirements for water efficient landscape design in this section if they include landscaped areas greater than 2,500 square feet. There are a few exemptions (like for homeowners and historic sites).

13.15.040 - Agricultural activities exempt from groundwater permitting requirements.

A. Applications to develop or improve a water source serving agriculture, as defined in Section 18.08.040 of this code, shall be exempt from the requirement of a groundwater permit under this

chapter where the water would only serve the property where the water source is located, or contiguous property. For purposes of this section only, "contiguous property" refers to property in common ownership that is joined at more than one common point to the property the water source is located, or connected in a pattern of parcels, each joined to another, that includes the property where the water supply system is located. If the contiguous property consists of more than one parcel, all parcels must be in agricultural production, in order to qualify for an exemption pursuant to this section. To qualify for the exemption in this section, in the case of parcels designated Agricultural Resource ("AR") or Agriculture, Watershed and Open Space ("AWOS") at least eighty percent of the allowable, plantable land of each parcel must be in agricultural production.

B. Developments or improvements in water sources serving agriculture on any other properties, including adjacent property not qualifying as "contiguous" for purposes of this section, shall be subject to the same permitting criteria and standards identified in Sections 13.15.030 for metering, water level access, reporting and water usage and 13.15.070

C. Notwithstanding subsection (A) of this section, developments or improvements in water sources located on parcels included within those groundwater deficient areas depicted on Map 13-1 shall be subject to those permitting criteria and standards identified in Sections 13.15.030 for metering, water level access, reporting and water usage and 13.15.070

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

13.15.050 - Application for determination of exemption.

A. Prior to any employee, department or body of Napa County issuing any permit or approval as set forth in Section 13.15.020, said employee, department or body must first make a preliminary determination if a groundwater permit is required (or must be provided with such preliminary determination from another employee, department or body). Said determination shall consider if the permit or approval:

1. Is for a specific exemption as set forth in this chapter; or
2. Falls within the definition of a minor improvement or convenience improvement; or
3. Is eligible for a groundwater permit issued pursuant to subsection (C) of Section 13.15.030

B. If the proposed project is determined to be exempt from the requirement of a groundwater permit for reasons other than an agricultural exemption, no further groundwater review shall take place and a determination of exemption shall be issued by the director.

C. If the proposed project is claiming an agricultural exemption, the applicant must submit to the department an application for a groundwater permit agricultural exemption. The director shall respond, in writing, to the applicant on or before the end of fifteen days from the date of submittal. If the proposed project is determined by the director to be exempt from the requirement of a groundwater permit on the basis of the agricultural exemption authorized by Section 13.15.040 the holder of the exemption shall be required to file with the department a biennial report demonstrating that the parcel continues to be in at least eighty percent agricultural production of the allowable, plantable land. If the proposed project is determined not to be exempt from the groundwater review process, the determination of the director shall serve as notice to the applicant that a groundwater permit must be issued before the proposed project is begun.

D. If the proposed project is determined not to be exempt based on a preliminary determination, the employee, department or body of Napa making such determination shall provide written notice to the applicant that a groundwater permit must first be issued.

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

13.15.060 - Application for groundwater permit.

Each applicant determined not to be exempt or eligible for a groundwater permit issued pursuant to subsection (C) of Section 13.15.030 shall be required to obtain a groundwater permit and shall submit a groundwater permit application to the director, using a form provided by the director. That application shall:

A. Identify any present and future uses of any existing water system, including whether and to what extent groundwater is or will be used as a water source on the affected property. For the purposes of this chapter, when an applicant identifies the existing water uses on a parcel to establish the existing water use level on that parcel, those existing uses which will be considered by the director are only those legitimate water using activities such as residential structures, other legal uses (wineries, etc.), vineyards, or other viable agricultural crop or animal operation which were not discontinued for more than two years prior to the date of the application for the groundwater permit. Random irrigation practices that serve no beneficial use (e.g., watering pasture when no animal or crop is dependent on that water) will not be considered as an existing water use. For the purposes of the application, future uses are those for which permits will be secured or improvements completed within two years of the application;

B. Identify any water sources other than groundwater intended to be used;

C. If the proposed application is for the development of a new water system or improvement to an existing water system, state the number of parcels and service connections the new water system or improvement are intended to serve, identify the location of the structures and improvements to be served by that new or improved water system, and identify existing and future uses and users to be served by that new or improved water system;

D. Whether the intent is to transfer some or all of the groundwater extracted pursuant to the permit to a public agency for use by a public agency following issuance of the groundwater permit; and

E. In the form of a Water Availability Analysis ~~Phase I~~, as outlined in the Department of Public Works ~~August 2007~~ Water Availability Policy Report, as it may be amended from time to time, provide sufficient information and supporting documentation to enable the director of public works to determine whether it is likely the new water system, improvement or addition might significantly affect the impacted groundwater area or basin within Napa County, whether or not the proposed improvement or new system may be reasonably expected to adversely affect reasonable and beneficial uses of groundwater, interfere with surface water flows, ~~or~~ cause other adverse changes to the physical environment adversely affecting the impacted groundwater area or basin, or in any way conflict with the County's adopted groundwater policies or goals.

Comment [c13]: Removing the date from the title, leaving it as Water Availability Analysis Policy Report, as it may be amended from time to time.

Comment [c14]: GRAC suggestion, clarify groundwater policies and goals not ALL policies

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

13.15.070 - Processing of groundwater permit applications.

The following procedures and standards shall govern the review and disposition of applications requiring groundwater permits other than groundwater permits issued pursuant to subsection (C) of Section 13.15.030:

A. The director shall review an applicant's groundwater declaration submitted under this chapter for compliance with the requirements of this chapter and any other applicable provisions of law.

B. Following the director's determination that the groundwater declaration complies with Section 13.15.060, the director shall furnish a copy of the applicant's declaration to the director of the department of public works to obtain the written comments of that department on the application. The director of public works shall instruct the applicant to perform any testing or

produce supplemental information pursuant to the WAA requirements based on review of the application prepared under Section 13.15.060.~~required phase II or III water availability analysis required by the written procedures established by the department of public works.~~ The D~~d~~epartment of P~~p~~ublic W~~w~~orks, in assessing any required ~~phase II or phase III~~ analysis, shall take into consideration ~~the~~ any available evidence that indicates the potential direct impacts due to pumping on ~~changes in static water levels of~~ neighboring wells prior to submitting its comments. The director of public works shall submit its comments in the form of a written appraisal of the application to the director. That appraisal shall assess available evidence that indicates the potential for significant negative impacts on local groundwater~~the affected groundwater table~~, and assess potential adverse effects on reasonable and beneficial uses of groundwater, interference with surface water flows, or other adverse changes to the physical environment. The director shall review the application and the written comments and appraisal from the director of public works for the purposes of conducting the required environmental review.

Comment [c15]: The new WAA document will be specific on what is to be included and when, so the suggestion was to tie the two together here

C. The director shall consider approving a groundwater permit only after reviewing the declaration, the environmental determination, and any written comments received regarding the application, including the written appraisal of the department of public works. After that review, the director shall only approve a groundwater permit after making any necessary environmental determination and concluding, based on substantial evidence in the record, that the new water system, improvement or addition would not significantly affect the impacted groundwater basin in Napa County. In making this determination, the director shall consider, but is not limited to, the following factors: impact on the affected groundwater table; adverse effects on the reasonable and beneficial uses of groundwater; implementation of Best Management Practices; or other adverse changes to the physical environment.

D. In approving a groundwater permit, the director may impose reasonable conditions on the permittee as needed to satisfy the requirements of this chapter, minimize groundwater use and to protect the public health, safety and welfare including but not limited to requiring implementation of Best Management Practices, plumbing retrofits, installation of meters, monitoring and reporting, limits on groundwater consumption, and requirements that groundwater consumption be reduced in the future if the basin develops an overdraft condition. Additionally, any groundwater permit granted to a public agency, or granted to a person or persons who, subsequent to the issuance of the groundwater permit, intends to transfer some or all of the groundwater extracted pursuant to the permit to a public agency for use by a public agency, shall be valid for a maximum of three years. The grant of a permit subject to this three-year limitation shall include conditions relating to the termination and renewal of the permit; provided, however, that such conditions shall include, at a minimum, a condition that the permit may be renewed only upon the approving authority's finding that the renewal would not cause significant adverse effects on the affected groundwater basin or the surrounding agricultural operations.

E. If the director determines after review that the applicant's groundwater declaration satisfies the groundwater permitting requirements of this chapter, and any other applicable provisions of law, the director shall issue a tentative decision setting forth the conclusions reached in making the determination, and approving or conditionally approving a groundwater permit. If the director determines the application and groundwater declaration do not meet the permitting requirements of this chapter, or any other applicable provisions of law, the director shall issue a tentative decision denying the groundwater permit and setting forth the reasons therefore. Any tentative decision will be issued within thirty days of the date comments are received from the director of public works.

F. Within seven calendar days of the issuance of the tentative decision, the director shall give notice of its issuance, including the date on which a tentative decision will become final if a written request for a public hearing is not requested, which date shall be not less than ten calendar days following the date notice of the tentative decision is mailed. The notice shall be given by all of the following means:

1. Notice shall be personally delivered or placed in the mail to the applicant seeking approval of a groundwater permit under this chapter.
2. Notice shall be placed in the mail to each public entity with jurisdiction over any portion of the groundwater basin in which the proposed extraction would be expected to occur.
3. Notice shall be personally delivered or placed in the mail to the owners of all real property, including businesses, corporations, or other public or private entities, as shown on the latest equalized assessment roll, within three hundred feet of the outer perimeter of the properties that will utilize the extracted groundwater. In lieu of utilizing the assessment roll, the records of the county assessor or tax collector may be used if they contain information more recent than the assessment roll.
4. Notice shall be mailed to any person who has filed a written request therefor with the director. Such requests may be submitted at any time during the calendar year and shall apply for the balance of such calendar year.

G. The tentative decision shall become final once the period identified in the notice during which a public hearing may be requested has expired without such written request for a public hearing having been received.

H. If a public hearing is requested in a timely manner, the tentative decision shall be a nullity, in which case the director shall set the hearing date and personally deliver or mail a notice of the time, place and date of the hearing, in the same manner and to the same persons as the notice of the tentative decision was mailed or delivered. This notice shall be mailed not less than ten and not more than thirty calendar days prior to the date of the hearing. Any required hearing shall be de novo and shall commence within ninety days of receipt of a request for a hearing.

I. The director shall conduct the public hearing. Any member of the public may attend and present oral testimony, written or other evidence, or both. The proceedings shall be electronically recorded and the tapes thereof retained in the director's custody for three years after the hearing except during such time as they may be undergoing transcription for preparation of the record on appeal.

J. Within five calendar days following the conclusion of the public hearing, the director shall issue a final decision approving, conditionally approving, or denying the request to issue a groundwater permit. The director shall give notice of the final decision to all persons who appeared and presented testimony at the hearing.

K. Final determinations of the director (or on appeal, the Board of Supervisors) are discretionary for purposes of the California Environmental Quality Act (Pub. Res. Code, Section 21000, et seq.) except that determinations of exemption pursuant to subsection (A) of Section 13.15.030 or the issuance of a groundwater permit pursuant to subsection (C) of Section 13.15.030 are deemed ministerial acts and are exempt from the California Environmental Quality Act.

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

(Ord. No. 1374, § 24, 9-11-2012)

13.15.075 - Permit Required for export for use outside county.

A. A groundwater permit shall be required to extract groundwater for export for use outside the county.

B. No permit shall be approved authorizing the export for use of groundwater outside the county without conditions or assurance of the adequate, long-term supply for agriculture, conservation, domestic, industrial, and recreational uses in the affected watershed.

C. Notwithstanding paragraph A above, owners of single or multiple contiguous parcels that cross the County line may extract groundwater for use on their property without a groundwater permit.

13.15.080 - Exceptions.

Notwithstanding any other provisions of this chapter:

A. No groundwater permit shall be denied where the director (or on appeal, the Board of Supervisors) determines, after reviewing the entire record, that a denial would constitute an unconstitutional taking of property without just compensation, or would effect an unreasonable use or waste of water.

B. The groundwater review and permitting requirements of this chapter shall be waived when applying them would delay effective response to a general emergency declared by the Governor of the State of California or the Napa County Board of Supervisors. "General emergency," as used herein, refers to a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or other essential public services.

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

13.15.090 - Appeals.

Any person may appeal a final decision of the director made, following a request for hearing pursuant to subsection (H) of Section 13.15.070, in accordance with the procedures set forth in Chapter 2.88 of this code. Appeals of tentative decisions that become final because no request for a hearing was received, are not permitted.

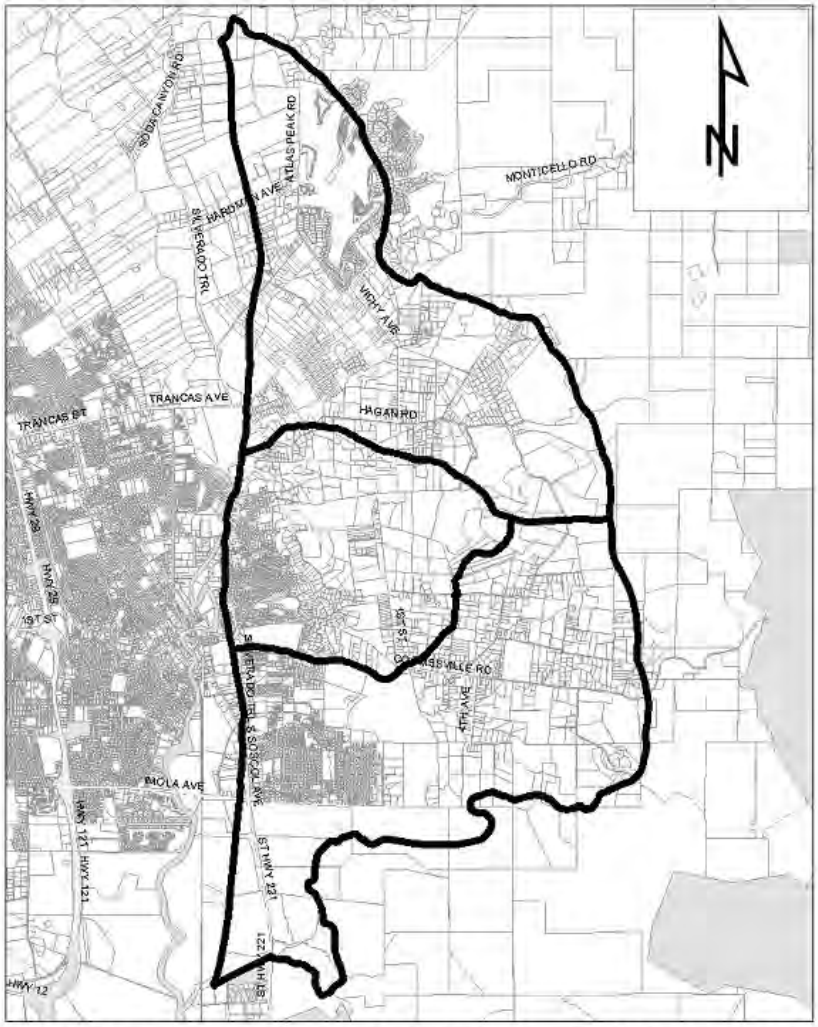
(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)

13.15.100 - Enforcement—Violation.

A. Criminal Penalties. Any person, firm or corporation, whether acting as principal, agent, employer or otherwise, who violates any provision of this chapter, or the terms and/or conditions of any permit issued pursuant to this chapter, with intent to do so shall be guilty of an infraction with a fine not exceeding one hundred dollars for the first violation, two hundred dollars for the second violation within one year, and five hundred dollars for the third violation within one year. Any subsequent violation shall be punishable as a misdemeanor, punishable by a fine not to exceed one thousand dollars per violation, or imprisonment not exceeding six months, or both such fine and imprisonment. Any person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted.

B. Civil Actions—Injunctive Relief. Napa County may elect to proceed with a civil action, including seeking injunctive relief, rather than proceed with criminal actions as described in subsection (A) of this section. Any person, firm or corporation, whether acting as principal, agent, employer or otherwise, who willfully violates any provision of this chapter, or the terms and/or conditions of any permit issued pursuant to this chapter, shall be liable for a civil penalty not to exceed one thousand dollars for each day or portion thereof, that the violation continues to exist. Any person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted. In determining the amount of the civil penalty to impose, the court shall consider all relevant circumstances, including, but not limited to, the extent of the harm caused by the conduct constituting the violation, the nature and persistence of such conduct, the length of time over which the conduct occurred, the assets, liabilities, and net worth of the violator, whether corporate or individual, and any corrective action taken by the violator.

(Ord. 1294 § 1 (part), 2007: Ord. 1230 § 3, 2003)



Map 13-1: Milliken Sarco Tulocay Groundwater Deficient Basin

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Napa County Department of Public Works

A Tradition of Stewardship
A Commitment to Service

Water Availability Analysis
Potential Modifications

Presentation to GRAC
June 27, 2013

Napa County Department of Public Works

Evolution of the Water Availability Analysis

- 1991—Initial report; response to drought; Initiates useful and regularly used Phase 1 concept (also Phases 2&3, though less successfully)
- 1999 BOS declares a 'groundwater deficient basin' and passes Groundwater Ordinance requiring permitting of new uses and establishing "Fair Share"
- 2007 WAA revised and updated
- Present: Update needed to reflect current understanding; establish thresholds for wells not requiring additional analysis

Napa County Department of Public Works

The Key Points Now

- Phase 1
  - Applicant estimates proposed uses based on rules of thumb
  - Valley Floor=1.0 acre-ft/acre; Hillside 0.5; MST 0.3;
  - If threshold is exceeded, then Phase 2 (pump tests) and Phase 3 (other tests) kick in
- Multiple Departments review
- "Phase 1" concept has worked reasonably well; not so much Phase 2 and 3
- Understanding of site specific intricacies evolving

Napa County Department of Public Works

The Major Changes

- Move away from Phase 1, 2, 3 terminology;
  - What we think of as Phase 1 largely works; Phase 2 and 3 concepts need to be reworked
- Make clear what information is required from applicants, and where county staff can supplement
- Develop screening criteria that can determine which wells need no further analysis
- Develop basic discussion of supplemental analysis that might be needed if criteria is not met (though actual analysis will be dictated by the specific situation)

WAA 4

Napa County Department of Public Works

The Major Changes (Cont'd)

- Define PBES as lead department (previously 3 departments acted in parallel)
- Determine if better (more current and accurate) water estimates can be identified as opposed to those used now
- Determine what Category the Carneros Region should be considered under (currently treated as "valley floor")

WAA 5

Napa County Department of Public Works

Next Steps

- Develop screening criteria (well to well; well to surface water)
- Return to GRAC in August with draft language
- Complete WAA document based on GRAC input
- Public outreach/revisions
- Board approval

WAA 6

WATER AVAILABILITY ANALYSIS

Policy Report

May 2013 Draft Update~~August 2007~~

Introduction:

At the height of the 1990 drought in Napa County, the Napa County Board of Supervisors and the Napa County Planning Commission became very concerned with the approval of use permits and parcel division that would cause an increased demand on groundwater supplies within Napa County. During several Commission hearings, conflicting testimony was entered as to the impact of such groundwater extraction on water levels in neighboring wells. The Commission asked the Department of Public Works to evaluate what potential impact an approval might have on neighboring wells and on the basin as a whole. In order to simplify a very complex analysis, the Department developed a three phase water availability analysis to provide a cost-effective answer to the question.

On March 6, 1991, an interim policy was presented and approved by the Commission which requires the applicants for use permits and parcel divisions to submit a water availability analysis with their proposal. The staff report that provides the procedure to follow for compliance with the Commission policy was intended to be an interim one. With the passage on August 3, 1999 by the Board of Supervisors of Napa County Ordinance #1162 (the Groundwater Conservation Ordinance) it became apparent that the interim policy required updating and formalization. ~~The purpose of the~~ A revised report was adopted in August 2007, ~~is to~~ providing~~e~~ the procedure for preparation of water availability analysis and ~~to~~ restating~~e~~ the purpose and functionality of the analysis as related to the revised Groundwater Ordinance (Napa County Ordinance # 1162).

In January 2011, the County's technical consultants, Luhdorff & Scalmanini, completed a review of the County's groundwater ordinance and procedures, and recommended updating the report and the water availability analysis. The consultants' review found that the initial "phase one" analysis was valuable as a screening process, but that the pump test envisioned in "phase two" was not the best way to assess whether projects that exceed the screening criteria will have groundwater impacts.

In the Fall of 2011, the Board of Supervisors appointed a Groundwater Resources Advisory Committee (GRAC) to assist with development of a groundwater monitoring program, and to recommend updates to the groundwater ordinance as needed. As part of their work, the GRAC also reviewed changes to this water availability analysis report in late 2012.

Water Availability Analysis:

Comment [tde1]: Delete Phase 1, 2 and 3 concept

Comment [tde2]: Perhaps rewrite to make it clear that groundwater resources are replenishable, but finite and tied to climate. As a result, responsible resource management must consider setting and other factors to ensure that new uses comply with reasonable standards of use and in such a way to avoid impacts to existing users. It follows that the WAA procedure outlined here is designed to screen and determine potential adverse effect in the context of finite availability.

Comment [VK3]: Shifting away from 3-phase analysis.

Comment [VK4]: Suggest add more background in the Introduction on the nature of groundwater occurrence in Napa County (e.g., complex hydrogeology, generally stable groundwater conditions except for the MST), the significance of precipitation events to groundwater recharge, and General Plan Update objectives.

Comment [VK5]: Also suggest that a statement of Purpose and Need be added that describes what it is that the WAA is intended to accomplish, i.e., overall proactive interest in evaluating proposed water use relative to potential impacts not only at the local scale (nearby neighboring wells or surface water) but also to sustain regional groundwater resources. The WAA sets forth criteria to evaluate the hydrogeologic setting of the proposed well(s), the relationship between the applicant's well and other nearby wells and/or surface water, and the applicant's estimated water use and planned well operation. The County wishes to evaluate the applicant's proposed project with initial screening criteria, including water usage factors that consider the variability of hydrologic and hydrogeologic conditions, to proactively avoid the over development of groundwater resources such as exist in the MST subarea.

The Water Availability Analysis (WAA) sets up a screening process for discretionary Groundwater Permit applications ~~guidelines~~ to determine if a proposed project may ~~will~~ have an adverse impact on the groundwater basin as a whole or on the water levels of neighboring wells or surface water bodies, and provides procedures for further analysis when screening criteria are exceeded. ~~with the overriding benefit of helping to manage groundwater resources.~~ An important sidelight to the process is public education and awareness. WAA's are based on an application which requires the applicant to gather information about existing wells and water uses, and to estimate future water demands. ~~comprised of potentially three phases; phase one, phase two and phase three.~~

Comment [VK6]: This may be a joint effort between the applicant and County staff, who would have greater accessibility some information relating to nearby wells.

A WAA application ~~**phase one analysis** is a reconnaissance level report that~~ may be prepared by the applicant or their agent. **It must be signed by the applicant. If prepared by the applicant's agent, it must contain the letterhead of the agent, the name of the agent, and the agent's signature.** The ~~phase one~~ WAA application contains the following information:

1. The name and contact information of the property owner and the person preparing the application~~phase one report~~.

2. Site map of the project parcel and adjoining parcels. The map should include: Assessor's Parcel Number (APN), parcel size in acres, location of project well(s) and other water sources, general layout of structures on the subject parcel, location of agricultural development and general location within the county. Approximate well locations on adjacent parcels should be identified based on review of public information available in the County's files. All nearby surface waters should also be identified, including springs or seeps.

3. Narrative on the nature of the proposed project including: all land uses on the subject parcel, potential for future water uses, details of operations related to water use, description of interconnecting plumbing between the various water sources and any other pertinent information.

4. Tabulation of existing water use compared to projected water use for all land uses contained on the parcel. Should the water use extend to other parcels, they should be included in the analysis (see Appendix E for additional information on determining screening criteria ~~fair share estimates~~ when multiple parcels are involved). **These estimates should reflect the specific requirements of the applicant's operations.** The applicant should use the guidelines attached in Appendix A to calculate projected water demand.

~~The~~ Public Works Department staff will review the application ~~analysis~~ for completeness and reasonableness (based on the guidelines outlined in Appendix A), review the County's groundwater data management system for additional relevant information about the characteristics of the groundwater areas/basin and nearby wells, ~~and then~~ compare the analysis to the screening criteria, and determine if additional analysis is

required. In reviewing available information, County staff will determine:~~a threshold level of groundwater use for the subject parcel~~.

5. The characteristics of the groundwater area or basin (i.e. confined or unconfined; alluvial or hard rock);
6. The identification of all existing wells within 500 feet of the proposed well that are completed to similar depths and the maximum capacity of the proposed well and the nearest neighboring well (reasonable estimates for any neighboring wells can be based on casing diameter using a look up table).

Comment [VK7]: Existing uses may also be relevant here; an ag well versus a domestic well, for example.

Screening Criteria

~~The threshold is based upon several factors including annual rainfall, topography, soil types, proximity to recharge zones and available groundwater information.~~

In general, the screening criterion for parcels located on the Valley Floor or in strong alluvial areas is ~~will be assigned a threshold of~~ 1 acre-foot per acre of land (an acre-foot of water is the amount of water it takes to cover one acre of land to a depth of one foot, or 325,851 gallons). Therefore, a 40-acre parcel will meet this criterion if ~~have an acceptable level of~~ the projected groundwater use would not exceed ~~of~~ 40 acre-feet per year. The criterion ~~threshold~~ for ~~H~~hillside parcels (primarily located in volcanic rock and soils) is 0.5 acre-feet per acre or 20 acre-feet per year for a 40-acre parcel. Areas designated as "Groundwater Deficient Areas" as defined in the Groundwater Conservation Ordinance will have criteria ~~threshold~~ established for that specific area. For example, the Milliken-Sarco-Tulocay Basin (M-S-T) is currently the only "groundwater deficient area" and the screening criterion for the MST is ~~has an established threshold of~~ 0.3 acre-feet per acre per year or "no net increase" over existing conditions, whichever is less~~. Thus, the same 40-acre parcel has an acceptable level of water use of 12 acre-feet per year~~ (see Appendix B).

Comment [tde8]: Definition?

Staff will identify the potential for well interference or impacts on surface water bodies supporting special status species based on additional screening criteria related to the distance between the well and the nearby well or surface water body in various hydrogeologic settings and under various well construction parameters. Specifically, the screening criteria for wells or new water use from an existing well located within [what aquifer properties?] that are [constructed how?] is X00 feet. Therefore, a new well or new water use from an existing well will meet this criterion if the well is more than X00 feet from the nearest adjoining well or water body, and constructed so as to [what?]. The screening criteria for wells or new water use from an existing well located within [what other conditions?] that are [constructed how?] is [what?] feet. Therefore, a well will meet this criterion if [what?]. [Do we need to reference a new appendix with a checklist/decision tree for staff use?].

Comment [VK9]: It is suggested that this paragraph be captured in tabular format instead of a text description where the table captures information related to the hydrogeologic setting, the physical location relative to nearby wells and/or surface water, proposed well construction and relation to the geologic setting, and water usage.

If these screening criteria cannot be met or if the proposed well is within X00 feet of a neighboring well or surface water body and insufficient information is available to judge its conformance with the criteria, then additional analysis may be required.

Comment [VK10]: This may be too absolute if the proposed well meets the intent of the precautionary measures, i.e., well distance slightly less than 500 ft from other features, or water usage slightly above water use criteria.

Additional Analysis Required

If the proposed project would exceed one or more of the screening criteria, ~~Phase I analysis shows a water use above the parcel threshold~~ then further analysis may~~may~~ be required. In most cases, this additional analysis will be undertaken to support the County's environmental review of the project pursuant to the California Environmental Quality Act (CEQA). The applicant or the applicant's representative should consult with County staff regarding the required scope of the analysis, which is likely to include consultation with a professional hydrologist, and may include field testing. At a minimum, the analysis is expected to include: ~~in the form of a Phase II or Phase III analysis.~~

- XXX
- YYY

Comment [tde11]: General testing criteria can be identified here depending on setting so that an applicant understand the scale and scope required if screening triggers the "Additional Analysis."

Comment [VK12]: Suggest expand this to include relating the proposed project area/well site to the County's updated understanding of the hydrogeologic setting, as applicable.

In instances where the applicant is in the M-S-T basin ~~and their estimated future water usage will be significantly less than the values listed in Appendix A, or if the estimate is within 50% of the estimated threshold~~, the County may require the applicant to install a water meter to verify actual groundwater usage. If the actual usage exceeds the projected use or the screening criteria, the ~~parcel's threshold,~~ applicant may be required to reduce groundwater consumption and/or find alternate water sources ~~to ensure that no more groundwater is consumed than the threshold for the parcel(s)~~ (See Appendix D).

~~In the M-S-T basin a phase one analysis examines only the estimated quantity of groundwater water usage as compared to the established water usage threshold. It is assumed that if all consumers within the MST basin were to limit their consumption to 0.3 acre-feet per acre per year* there will be sufficient groundwater for all properties within that area.~~

~~* Does not apply to the Ministerial Exemption as outlined in the Groundwater Conservation Ordinance~~

~~Any new project within the M-S-T Basin whose estimated use exceeds the threshold use will likely be recommended for denial to the County Department requesting review of the application.~~

~~For projects in all other areas within Napa County whose estimated water use exceeds the threshold, the applicant will be required to conduct either a~~ **~~phase two or a phase three analysis (or both).~~**

~~The phase two analysis is commonly called an acquifer test or well test. It requires the pumping of the project well(s) at the maximum rate needed to meet project water demands and at the same time requires the monitoring of the immediate effects of~~

~~groundwater pumping on a neighboring or monitoring well(s). The following requirements must be met when performing a phase two analysis:~~

- ~~An approved hydrogeologist, a list of which is on file with the Department of Public Works, must develop the test procedure. Upon approval of test procedures, the hydrologist will supervise the test and submit a report to the Department evaluating impacts to neighboring static water levels.~~
- ~~A licensed well drilling contractor must perform the actual testing and monitor static and dynamic water levels of the project well and monitoring wells during the duration of the test, including the recovery phase of the project well and monitoring wells.~~
- ~~The test must be conducted long enough to stabilize the dynamic water level of the project well or include an analysis of what the impact* of continued pumping would have.~~
- ~~The applicant or agent must notify the Department at least 48 hours prior to conducting the test.~~

~~* Impact is unique to each project and will be evaluated on a case by case basis by the department of public works.~~

~~Any projects requiring a phase two analysis may also be required to install water meters to measure the actual amount of water consumed, and be required to find alternate water sources if their actual groundwater usage exceeds the threshold for their property (see Appendix D).~~

~~The Department will review the phase two analysis and determine if the impacts to static water levels of neighboring wells are within acceptable limits. If the phase two is unacceptable, **a phase three analysis** is required. The phase three analysis may include many measures aimed at reducing water consumption and/or the maximum pumping rate. The Department will require periodic monitoring of static water levels with annual submittals of well production and static water level reports.~~

~~The phase three analysis only determines possible actions which could be taken to moderate the immediate effects of groundwater pumping to neighboring wells. These mitigation measures will be designed to reduce, but may not eliminate, the immediate effects of groundwater pumping to neighboring wells.~~

The preparation and submittal of WAA's for all use permits and parcel divisions, as well as for all Groundwater Conservation Ordinance permits must be submitted to the Department of Planning, Building and Environmental Services (PBES), which will consult with the Department of Public Works, and be the conduit for communication between the County and the applicant. ~~through the normal procedures for the Conservation, Development and Planning Department (CDPD) and the Department of Environmental management (DEM) respectively.~~ All subsequent communication should likewise pass through PBES~~CDPD or DEM~~. Any mitigation measures identified via the

additional ~~in the phase three~~ analysis will become either project modifications to, or conditions of approval for, the proposed project.

Details of the use permit, ~~or~~ land division, or groundwater ordinance can be obtained from PBES, along with ~~CDPD and details of the Groundwater Ordinance and related permit process can be obtained from the Department of Environmental Management. M~~mapping of "Groundwater Deficient Areas." ~~is available at all three Departments with final determination being supplied by the Department of Public Works.~~

Conclusions:

The Napa County Board of Supervisors has long been committed to the preservation of groundwater for agriculture and rural residential uses within the County. It is their belief that through proper management, the excellent groundwater resources found within the county can be sustained for future generations.

Since 1991, several conclusions can be drawn from application of the water availability analysis process:

- In the process of conducting the analysis, applicants become much more aware of water use for their project, providing a higher level of awareness and potentially leading to more efficient use of the resource.

- Information submitted by applicants has lead to a broader database for future study and management.

- Groundwater use can vary widely depending upon its availability.

- The ~~current~~ practice of evaluating an applicant's ~~Phase I~~ WAA by using screening criteria to determine if additional analysis is an ~~needed has been the~~ accepted method for making groundwater determinations. Based on the ~~Due to the limited~~ information available on Napa County groundwater basins ~~in general (with the exception of the MST basin)~~, the screening criteria present a ~~Phase 1 WAA has been the most~~ reasonable approach to the process and the water use criteria have~~s~~ not been shown to be inaccurate or inadequate since their original application in 1991. As such, the established WAA procedures for making groundwater determinations as outlined above and throughout the Appendices will continue to be the accepted method of making groundwater determinations and findings.

The water availability analysis is based upon the basic premise that each landowner has equal right to the groundwater resource below his or her property. By attempting to limit the extraction to a threshold amount, it is believed that sufficient groundwater will be available for both current and future property owners. By ensuring wells and water uses that are subject to the WAA are located and constructed so as to avoid impacting neighboring wells and surface water bodies, the County will minimize neighbor disputes and avoid the potential for significant environmental impacts.

Comment [VK13]: And potential for recharge and replenishment of the aquifer system pending climatic factors.

Comment [VK14]: Suggest rephrase to relate to consistency with the County's groundwater ordinance and state Water Code.

Comment [VK15]: Screening criteria. Intent is to reflect understanding of groundwater occurrence and availability and to fairly allocate groundwater resources given the hydrogeologic and hydrologic constraints and potential for replenishment of the aquifer system.

APPENDIX A: Estimated Water Use for Specified Land Use (other standards are available and may be more appropriate)

Guidelines for Estimating Residential Water Use-~~For use with the Phase I Form~~

The typical water use associated with residential buildings is as follows:

Primary Residence	0.5 to 0.75 acre-feet per year (includes minor to moderate landscaping)
Secondary Residence	0.20 to 0.50 acre-feet per year
or Farm Labor Dwelling	~~0.06 to 0.10 acre-feet per person per year~~

Additional Usage to Be Added

1. Add an additional 0.1 acre-feet of water for each additional 1000 square feet of drought tolerant lawn or 2000 square feet of non-xeriscape landscaping above the first 1000 square feet.
2. Add an additional 0.05 acre-feet of water for a pool with a pool cover.
3. Add an additional 0.1 acre-feet of water for a pool without a cover.

Residential water use can be estimated using the typical water uses above. All typical uses are dependant on the type of fixtures and appliances, the amount and type of landscaping, and the number of people living onsite. If a residence uses low-flow fixtures and has appliances installed, is using xeriscape landscaping, and is occupied by two people, the water use estimates will be on the low side of the ranges listed above.

Examples of Residential Water Usage:

Residential water use can vary dramatically from house to house depending on the number of occupants, the number and type of appliances and water fixtures, the amount and types of lawn and landscaping. Two homes sitting side by side on the same block can consume dramatically different quantities of water.

Example1:
Home #1 is 2500 square feet. Outside the house there is an extensive bluegrass lawn, a lot of water loving landscaping, a swimming pool with no pool cover. Inside the house all the appliances and fixtures, including toilets and shower-heads, are old and have not been upgraded or replaced by water saving types. The owners wash their cars weekly but they don't have nozzles or sprayers on the hose. They do not shut off the water while they are soaping up the vehicles, allowing the water to run across the ground instead. Water is commonly used as a broom to wash off the driveways, walkways, patio, and other areas. The estimated water usage for Home #1 is 1.2 acre-feet of water per year.

Example2:
Home #2 is also 2500 square feet. Outside of the house there is a small lawn of drought tolerant turf, extensive usage of xeriscape landscaping, and no swimming pool. Inside the house all of the appliances and fixtures, including toilets and showerheads, are of the low flow water saving types. The owners wash their cars weekly, but have nozzles or sprayers on the hose to shut off the water while they are soaping up the vehicles. Driveways, walkways, patios, and other areas are swept with brooms instead of washed down with water. Estimated water usage for Home #2 is 0.5 acre-feet of water per year.

The above are only examples of unique situations. The estimated water use for each project will vary depending on existing parcel conditions.

Guidelines For Estimating Non-Residential Water Usage:

Agricultural:

Vineyards	
Irrigation only	0.2 to 0.5 acre-feet per acre per year
Heat Protection	0.25 acre feet per acre per year
Frost Protection	0.25 acre feet per acre per year
~~Farm Labor Dwelling~~	~~0.06 to 0.10 acre-feet per person per year~~
Irrigated Pasture	4.0 acre-feet per acre per year
Orchards	4.0 acre-feet per acre per year
Livestock (sheep or cows)	0.01 acre-feet per acre per year

Winery:

Process Water	2.15 acre-feet per 100,000 gal. of wine
Domestic and Landscaping	0.50 acre-feet per 100,000 gal. of wine

Industrial:

Food Processing	31.0 acre-feet per employee per year
Printing/Publishing	0.60 acre-feet per employee per year

Commercial:

Office Space	0.01 acre-feet per employee per year
Warehouse	0.05 acre-feet per employee per year

Parcel Location Factors:

The ~~allotment of~~ water demand screening criterion for each parcel is based on the location of the parcel. There are three different location classifications. Valley Floor, Hillside and Groundwater Deficient Areas. Valley Floor areas include all locations that are within the Napa Valley and the Carneros Region except for areas specified as groundwater deficient areas. Groundwater Deficient areas are areas that have been determined by the Department of Public Works as having a history of problems with

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groundwater. The only Groundwater Deficient Basin in Napa County is the MST basin. All other areas are classified as Hillside Areas. Public Works can assist you in determining your classification.

Parcel Location Factors

Valley Floor	1.0 acre feet per acre per year
Hillside Areas	0.5 acre feet per acre per year
MST Groundwater Deficient Area	0.3 acre feet per acre per year or no net increase, whichever is less*

* Does not apply to the Ministerial Exemption as outlined in the Groundwater Conservation Ordinance

The threshold for the Valley Floor Area was determined in 1991 in the form of a Staff Report to the Board of Supervisors. The value of 1.0 AF/A/Year was established as the typical water demand of a vineyard. ~~It was noted that the Valley Floor threshold would have relatively little effect on neighboring wells.~~

The threshold for the Mountain Area was established due to the uncertainty of the geology, and the increasingly fractured aquifer in the mountainous and non-Napa Valley areas including Carneros, Pope Valley, Wooden Valley, and Capell Valley.

The threshold of 0.3 acre feet per acre per year for the Groundwater Deficient Areas was determined using data from the 1977 USGS report on the Hydrology of the Milliken Sarco Tulocay region. The value is calculated by dividing the "safe annual yield" (as determined by the USGS study of 1977) by the total acreage of the affected area (10,000 acres). The addition of the "no net increase" standard reflects the County's obligation to assess potential cumulative impacts under CEQA. In a groundwater deficient area, any discretionary project that increases groundwater use may contribute to the declining ~~acquifer~~aquifer.

All three criteria of the above were reviewed and validated by the County's groundwater consultants in 2011-2013 as reasonable indicators of the levels below which significant environmental impacts would not occur. Their validation was based on a review of monitoring data and an updated hyrdrogeologic conceptualization of the Napa Valley system.[cite report]

APPENDIX B: Values Used to Establish Thresholds

Average Annual Rainfall (Source: Napa County Road & Streets Standards):

American Canyon	1.5 feet per year
City of Napa	2.0 feet per year
Yountville	2.5 feet per year
Oakville	2.5 feet per year
Rutherford	2.67 feet per year
St. Helena	2.75 feet per year
Calistoga	3.0 feet per year
Western Hills	increase by 20%
Eastern Hills	increase by 10%

Threshold Factors of Acceptable Water Use:

Valley Floor	1.0 acre-foot per acre
Hillsides	0.5 acre-foot per acre
MST Groundwater Deficient Areas	0.3 acre-foot per acre or no net increase, whichever is less*

* Does not apply to the Ministerial Exemption as outlined in the Groundwater Conservation Ordinance

APPENDIX C: Guidance for M-S-T Basin Permit Applications

Data collected from the monitoring of wells within the M-S-T Basin over the last forty years indicate that it may be in overdraft, leading to the conclusion that the existing water users within the basin are pumping more water from the ground than is being naturally replaced each winter season. The only way to end the overdraft trend is to cease all water extraction from the basin. However, as no other reasonable water resources currently exist in the M-S-T, the County~~Department~~, to avoid a ban on all new construction, has permitted ~~assumed that~~ each property owner ~~should be able~~ to develop their property with the uses involving ministerial approvals under Section 13.15.030(C) of the groundwater ordinance, which are limited to a "reasonable" level of water use that may ~~while~~ reduc~~e~~ing the rate at which the groundwater levels are being lowered.

~~Within the near future, the U.S.G.S. will release a report on a recent study of the M-S-T Basin. From the U.S.G.S. report we will be able to determine to what extent the overdraft condition may exist and infer what problems may occur from the continued extraction of groundwater from the Basin. Results of the study will be used to plan for alternatives to address these problems. Until the report is available, and alternative measures can be implemented, the Department will use the following analysis to evaluate impacts from proposed projects in the M-S-T Basin:~~

Single Family Dwellings on Small Parcels In the M-S-T Basin: The average, single family dwelling will likely use between 0.5 and 0.75 acre-feet of groundwater per year. Using a threshold of 0.3 acre-ft/year/acre, the minimum parcel size able to support the above range is between 1.5 to 2.5 acres. Therefore, if an existing residence that uses 0.5 acre-feet per year of groundwater is located on a one-acre parcel, it already exceeds the acceptable level of water use for the property. Applications for the construction of a single family home in these instances can be approved ministerially if the owner agrees to the conditions outlined in the Groundwater Ordinance. If the conditions are not agreed upon, or if the project involves a secondary dwelling or other groundwater uses not consistent with a single family dwelling, then the project would be subject to the analysis outlined in the WAA report, and the County cannot approve the ~~complete~~ groundwater permit unless the proposed use is off-set by reductions elsewhere, such that the "no net increase" screening criterion is met. ~~process including but not limited to the submittal of a Phase 1 analysis detailing all water use, existing and proposed, on the project parcel~~.

Agricultural Development In the M-S-T Basin: Agriculture in the M-S-T Basin is not exempt from the groundwater permit process. In these cases, such development will require an application for a groundwater permit ~~including~~ and a WAA~~a phase one analysis~~ detailing the existing and proposed water use(s) on the project parcel(s). ~~It is likely that a~~All new agricultural development in the M-S-T will be required to meter all wells supplying water to the property with periodic reports to the Department, and the County cannot approve the groundwater permit unless the proposed use is off-set by reductions elsewhere, such that the "no net increase" screening criterion is met.

Existing Vineyard, New Primary or Secondary Residence In the M-S-T Basin: On an application related to a new residence on a parcel with an existing vineyard or residence, the ~~Phase 1~~ WAA shall include all water use on the property, both existing and proposed. Projects on parcels with an established vineyard will ~~likely~~ be required to meter all wells supplying water to the property with periodic reports to the Department.

Wineries and Other Use Permits In the M-S-T Basin: On an application for a use permit, the applicant is required to provide a WAA~~phase one analysis~~. Should the application be approved, a specific condition of approval will be required to meter all wells supplying groundwater to the property with periodic reports to the Department. ~~It is also possible that w~~Water conservation measures will also be a condition of approval where appropriate. All new use permits must meet the threshold water use for the project parcel and the County cannot approve the discretionary use permit unless the proposed use is off-set by reductions elsewhere, such that the "no net increase" screening criterion is met.

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APPENDIX D: Water Meters (in Groundwater Deficient Areas Only)

If required, water meters shall measure all groundwater used on the parcel. Additional meters may also be required for monitoring the water use of individual facilities or operations, such as a winery, residence, or vineyard located on the same parcel. If a meter(s) is installed, the applicant shall read the meter(s) and provide the readings to the County Engineer at a frequency determined by the County Engineer. The applicant shall also convey to the County Engineer, or his designated representative, the right to access and verify the operation and reading of the meter(s) at any time.

If the meters indicate that the water consumption of a parcel in the M-S-T basin exceeds the fair share amount, the applicant will be required to submit a plan which will be approved by the Director of Public Works to reduce water usage. The applicant may be required to find additional sources of water to reduce their groundwater usage. Additional sources may include using water provided by the City of Napa, the installation of water tanks which are filled by water trucks, or other means which will ensure that the groundwater usage will not exceed the fair share amounts.

The readings from water meters may also be used to assist the County in determining trends in groundwater usage, adjusting baseline water use estimates, and estimating overall groundwater usage in the M-S-T basin.

Appendix E: Determining water use numbers with multiple parcels

The water availability analysis is based on the premise that each landowner has equal right to the groundwater resource below his or her property. There will be cases where one person or entity owns multiple parcels and requests that the total water allotment below all of his or her parcels be considered in the ~~Phase I~~ water availability analysis. Determining the total threshold based on multiple parcels is acceptable, however to protect future property owners, certain safeguards must be in place to ensure that the water allotment and transfer between parcels is clearly documented and recorded, especially in cases where the water from more than one parcel will ultimately serve a use on a single parcel.

When multiple parcels are involved, the parcels for which the total threshold is being based on must be clearly identified on a site plan with assessors parcel numbers noted. The transfer of water from these parcels to the parcel on which the requested use is located must be documented using the form provided by the department of public works. The form must be approved by the County and subsequently recorded by the applicant prior to commencement of any activity authorized by the groundwater permit or other county permit or approval. A condition requiring such will be placed on the use permit, groundwater permit or other permit for approval.

Alternatively, if the method above is not feasible, the applicant may provide a Phase One Analysis for each project parcel, with the understanding that the water use on each

individual parcel must not exceed the fair share for that parcel (and or the existing use if the parcel is in the MST groundwater deficient basin).

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