



A Tradition of Stewardship  
A Commitment to Service

Agenda Date: 12/13/2016  
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Set Time: 9:00 AM  
Estimated Report Time: 4 hours

## NAPA COUNTY BOARD OF SUPERVISORS Board Agenda Letter

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**TO:** Board of Supervisors

**FROM:** Steven Lederer - Director of Public Works  
Public Works

**REPORT BY:** Patrick Lowe, Natural Resources Conservation Mgr - 259-5937

**SUBJECT:** Approve and Authorize Submittal of the Napa Valley Groundwater Sustainability - A Basin Analysis Report for the Napa Valley Subbasin to the California Dept of Water Resources (DWR)

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### **RECOMMENDATION**

Director of Public Works requests approval of and authorization to submit the Napa Valley Groundwater Sustainability - A Basin Analysis Report for the Napa Valley Subbasin, to the California Department of Water Resources (DWR) to meet the legislative deadline of January 1, 2017 for Sustainable Groundwater Management Act (SGMA) compliance.

### **EXECUTIVE SUMMARY**

Upon direction from the Board of Supervisors at their March 3, 2015 meeting, Napa County began work to meet the requirements of the Sustainable Groundwater Management Act (SGMA) through development of a Basin Analysis Report, one of the Alternatives defined in the Act. This report, *Napa Valley Groundwater Sustainability - A Basin Analysis Report for the Napa Valley Subbasin* (BAR), provides an extensive analysis of the basin that demonstrates the basin has operated within its sustainable yield for at least 10 years and that it is being managed consistent with the goal of SGMA and CA Department of Water Resources (DWR) regulations for Alternative submittals. For medium and high priority groundwater basins/subbasins, a Basin Analysis Report or other Alternative must be submitted to DWR by January 1, 2017. The Napa Valley Subbasin is the only basin in the County with a medium priority ranking by DWR that is subject to SGMA.

The draft Basin Analysis Report was completed in the fall of 2016 and presented at meetings/workshops of the Napa County Watershed Information and Conservation Council (WICC) for public comment. The first WICC meeting/workshop was held on Thursday, September 22, 2016 with a second workshop held on Thursday, November 3, 2016. The Report was also available on the WICC website prior to the meetings. To address comments and questions, a Frequently Asked Questions summary and a Response to Comments Table were prepared. The Board of Supervisors approval of the Basin Analysis Report at today's meeting will allow for

submittal to DWR prior to the January 1, 2017 deadline. Upon approval by DWR, annual groundwater conditions reports and five-year updates of the Basin Analysis Report are required to ensure continued sustainability of the basin and compliance with SGMA.

### **PROCEDURAL REQUIREMENTS**

1. Staff reports.
2. Public comments.
3. Motion, second, discussion and vote on the item.

### **FISCAL IMPACT**

Is there a Fiscal Impact?                      No

### **ENVIRONMENTAL IMPACT**

**“ENVIRONMENTAL DETERMINATION:** The proposed action has been granted a statutory exemption from CEQA pursuant to California Water Code section 10728.6.

**Consideration and possible adoption of a Categorical Exemption Class 6:** It has been determined that this type of project does not have a significant effect on the environment and is exempt from the California Environmental Quality Act. The project will not impact an environmental resource of hazardous or critical concern, has no cumulative impact, there is no reasonable possibility that the activity may have a significant effect on the environment due to unusual circumstances, will not result in damage to scenic resources, is not located on a list of hazardous waste sites, cause substantial adverse change in the significance of a historical resource or extract groundwater in excess of the standards as set by the County. [See Class 6 (“Information Collection”) which may be found in the guidelines for the implementation of the California Environmental Quality Act at 14 CCR §15306.]

**Consideration and possible adoption of a Categorical Exemption Class 7:** It has been determined that this type of project does not have a significant effect on the environment and is exempt from the California Environmental Quality Act. [See Class 7 (“Actions by Regulatory Agencies for Protection of Natural Resources”) which may be found in the guidelines for the implementation of the California Environmental Quality Act at 14 CCR §15307.]

### **BACKGROUND AND DISCUSSION**

The Sustainable Groundwater Management Act (SGMA), historic legislation enacted by Governor Brown in September 2014, provided a new structure for sustainable management of California’s groundwater basins. On January 1, 2015 the California Department of Water Resources (DWR) began implementing the Act, including the development of new regulations to guide local groundwater sustainability efforts. SGMA established a sustainability goal for groundwater basins throughout the state, prioritized basins, established a timeline for implementation, and provided for new Groundwater Sustainability Agencies (GSA). It also required the development of Groundwater Sustainability Plans (GSPs), or Alternatives that are equivalent to them, to ensure that basins are operated within their sustainable yield.

Where basins have ongoing successful groundwater management programs, a local agency may elect to submit an Alternative that demonstrates that the groundwater basin is being sustainably managed. Napa County was well

suited to meet the requirements for an Alternative due to its on-going groundwater sustainability program, which includes: an ongoing and evolving groundwater monitoring network and program, annual groundwater conditions reporting, an Updated Hydrogeologic Conceptualization and Characterization of Conditions Report (2013), development of new groundwater/surface water monitoring facilities along the Napa River, and a long-term public education and outreach program through the Watershed Information & Conservation Council (WICC, active since 2002).

As a result, Napa County began work to implement SGMA upon direction from the Board of Supervisors at their March 3, 2015 meeting. The County and its groundwater consultant began work to meet the requirements of SGMA, which is in the form of a Basin Analysis Report (one of the Alternatives defined in the Act). This report, Napa Valley Groundwater Sustainability - A Basin Analysis Report for the Napa Valley Subbasin, provides an extensive analysis of the basin that demonstrates it has operated within its sustainable yield for a period of 10 years or more and that it is being managed consistent with the goal of SGMA and DWR regulations for Alternatives to GSPs. For medium and high priority groundwater basins/subbasins, a Basin Analysis Report or other Alternative must be submitted to DWR by January 1, 2017. The Napa Valley Subbasin is the only basin in the County with a medium priority ranking by DWR that is subject to SGMA at this time.

The draft Basin Analysis Report was completed in the fall of 2016 and presented at meetings/workshops of the Napa County WICC for public comment. The first WICC meeting/workshop was held on Thursday, September 22, 2016 with a second meeting held on Thursday, November 3, 2016. The Report was also available on the WICC website prior to the meetings at: <http://www.napawatersheds.org/groundwater>. The Board of Supervisors will consider approval of the Basin Analysis Report at this meeting to allow for submittal to DWR prior to the January 1, 2017 deadline. Upon approval by DWR, annual groundwater conditions reports and five-year updates of the Basin Analysis Report will be prepared as required to ensure continued sustainability of the basin and compliance with SGMA.

An Overview of the Basin Analysis Report is provided below. This short overview is contained in the front of the Basin Analysis Report (BAR). For those wanting more detail, but who do not have an interest in delving into the several hundred page main report, there is also an approximately 25 page Executive Summary at the beginning of the report.

**Overview** (as excerpted from the BAR):

The Basin Analysis Report, an Alternative Submittal per the requirements of Water Code Section 10733.6 (b)(3), is an analysis of basin conditions that demonstrates that the basin has operated within its sustainable yield over a period of at least 10 years. The Basin Analysis Report covers the entire Napa Valley Subbasin, which has been designated by the State as a medium priority basin and is subject to specific requirements under SGMA. While the report analyzes areas outside the Subbasin to determine how those areas affect recharge and runoff in the Subbasin, the areas outside the Subbasin are not subject to SGMA.

Since 2008, the County and others' efforts, have been instrumental in implementing groundwater management actions to better understand groundwater conditions, establish monitoring to track conditions, conduct education and outreach, and develop other programs to maintain groundwater sustainability. These efforts have included the adoption of Goals and Policies in the 2008 General Plan and creation of the Groundwater Resources Advisory Committee (GRAC; 2011 to 2014) for implementation and community outreach.

Groundwater conditions in the Napa Valley Subbasin have been and continue to be assessed using current and historical groundwater level and groundwater quality data. An extensive network of over 100 wells is used in this endeavor. Groundwater level trends in the Napa Valley Subbasin are stable in a majority of wells having long-term groundwater level records. While several wells have shown at least some degree of response to recent drought conditions, levels are generally higher than they were in the same wells during the 1976 to 1977 drought.

The Napa River system is affected by a number of factors, groundwater being only one of them. It can also be more sensitive during dry (low rainfall) years and also drier periods within the year. The Napa River system has experienced these temporal and seasonal effects over many decades (since the 1930s), particularly during the summer to fall period. More recently, new groundwater monitoring wells and surface water monitoring facilities have been constructed under a California Department of Water Resources grant. These new monitoring wells provide for the collection of continuous groundwater level and stream data to better assess the spatial and temporal interconnection of surface water and groundwater resources. The timing and occurrence/amount of precipitation and natural groundwater recharge events affect the amount of groundwater baseflow discharged to the Napa River system.

While outflows from the Subbasin, including groundwater pumping, affect the surface water system, monitoring indicates that effects on the Napa River due to more or less groundwater pumping have not changed over time. Additionally, groundwater pumping is a relatively small outflow component compared to surface water stormflows and groundwater baseflow discharged to the River and ultimately to the San Pablo Bay. Flow and other aspects of the Napa River are affected by many factors beyond the County's control (e.g., precipitation and climate change), and some factors potentially within the County or State's control (e.g., upstream damming or withdrawal of water from tributaries and historical removal of natural wetlands and floodplains). These are not under the purview of SGMA, though the Board of Supervisors is addressing many of them in other appropriate forums.

Groundwater and surface water supplies, including water imports serving municipal areas, in the Napa Valley Subbasin are dependent on population trends and land uses and their associated water demands. Long-term conditions in the Napa Valley Subbasin during the 1988 to 2015 base period (e.g., Basin Analysis Report study period) have been marked by stable land uses and stable supplies of imported surface water. While most of the population in the Subbasin lives in the four incorporated municipalities (Cities of Napa, St. Helena, Calistoga, and Town of Yountville), the majority of the land is outside the municipalities and used for agriculture. Municipal water use for the entire Valley was 16,655 AFY in 1988 and 14,729 AFY in 2015 (i.e., an average of 18,700 acre-feet per year (AFY)) over the 1988 to 2015 study period). The majority of this water is provided by reservoirs, increasing amounts of imported State Water Project water, and to a much smaller extent groundwater. Over the 28-year base period, water uses in the unincorporated part of the Subbasin have increased from about 4,000 AFY to about 5,000 AFY, and are mostly supplied by groundwater.

Agricultural water supplies include groundwater pumped from the Subbasin, recycled water, surface water diverted from the Napa River system within the Subbasin, and surface water diverted from the Subbasin watershed (i.e., hillside areas). On average, the rate of total water use (surface water and groundwater) by agriculture within the Subbasin has decreased slightly from approximately 18,000 AFY in 1988 to approximately 16,000 AFY in 2015. With variations in the water supply mix on a year-to-year basis, surface water use has decreased by about 8,900 AFY, while groundwater utilization has increased by about 7,400 AFY over the same period. These changes are affected by a number of factors, including increases from new and expanded wineries and vineyards, balanced against greatly improved conservation practices and decreased residential population in the unincorporated areas. The analysis includes estimated additional groundwater needs for wineries and vineyards looking forward through 2025, based upon the past five years of development proposals within the Subbasin.

A combined surface water and groundwater watershed-scale water budget for the Subbasin was developed to assess inflows and outflows to the Subbasin and to determine the average annual change in groundwater storage over the base period (using a model with a monthly time step). The magnitude of the surface water components in the budget demonstrates that large quantities of water that move through the Subbasin in most years are the predominant factor as compared to the amounts of groundwater pumped from the Subbasin or flowing out of the Subbasin as subsurface outflow. Average annual changes in groundwater storage over the base period are positive, indicating that current groundwater pumping rates are below the sustainable yield for the Subbasin. The average annual increase in storage is estimated to be 5,900 AFY, which is consistent with stable to slightly above average cumulative precipitation inputs over the 28-year base period. A separate independent analysis of

groundwater levels and corresponding spring-to-spring changes was also conducted to compute the change in groundwater storage; this analysis also shows positive average annual changes in groundwater storage for the 1988 to 2015 base period.

The analysis presented in the Napa Valley Subbasin Basin Analysis Report demonstrate that the basin has operated within its sustainable yield over a period of more than 20 years. Stable groundwater levels observed during recent drought conditions (from 2012 through 2015) suggest that recent rates of groundwater pumping have not exceeded the sustainable yield of the Subbasin. The sustainable yield analysis establishes the maximum amount of water that can be withdrawn annually from the Subbasin groundwater supply without causing an undesirable result. The sustainable yield is within approximately 17,000 AFY to 20,000 AFY. By comparison, groundwater pumping has averaged about 18,000 AFY during the 2012 to 2015 drought.

During the past 7 years, Napa County has made significant progress towards implementing groundwater-related studies and recommendations provided by those studies. In conformance with SGMA, the intent of the GRAC, and the vision of the Napa County Board of Supervisors (April 2014), the Napa Valley Subbasin SGMA Sustainability Goal is:

*To protect and enhance groundwater quantity and quality for all the people who live and work in Napa County, regardless of the source of their water supply. The County and everyone living and working in the county will integrate stewardship principles and measures in groundwater development, use, and management to protect economic, environmental, and social benefits and maintain groundwater sustainability indefinitely without causing undesirable results, including unacceptable economic, environmental, or social consequences.*

The Napa Valley Subbasin Basin Analysis Report will implement SGMA monitoring and reporting requirements and also provide additional recommendations to maintain or improve groundwater conditions and ensure overall water resources sustainability. In order to meet the goals established by the Board of Supervisors, it is critical that the County continue to invest in the Groundwater Program to expand the range of information and understanding of this complex water resources system. To summarize some of the proposed actions in the document, where the County has discretionary authority, permit holders should be required to monitor their use, and data must be made available for analysis when needed. Abusive water use, when identified, must be corrected. Education and outreach should be made available to all users; only by collaborating as a community and sharing stewardship responsibilities can the people living and working in Napa County ensure that water resources are sustainable. This report should be treated as a dynamic “living” document that continually informs the County and the public of water resources conditions and actions that need to be implemented to maintain sustainability.

### **SUPPORTING DOCUMENTS**

- A . Basin Analysis Report Executive Summary
- B . SGMA-Napa County GW Program Timeline
- C . Basin Analysis Report
- D . Basin Analysis Report Appendices Part 1 of 2
- E . Basin Analysis Report Appendices Part 2 of 2
- F . Frequently Asked Questions (FAQs)
- G . Response to Comments Table

CEO Recommendation: Approve

Reviewed By: Bret Prebula