



Agenda Date: 11/12/2020

Agenda Placement: 6D

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GROUNDWATER SUSTAINABILITY PLAN ADVISORY COMMITTEE **Board Agenda Letter**

TO: Groundwater Sustainability Plan Advisory Committee

FROM: David Morrison - Director of Planning, Building and Environmental Services
PBES - Environmental Health

REPORT BY: Jeff Sharp, SUPERVISING PLANNER - 707-259-5936

SUBJECT: Presentations and Discussion on Addressing Climate Change in the the Napa Valley
Groundwater Sustainability Plan

RECOMMENDATION

Committee Secretary and Facilitator requests the Committee receive and discuss two presentations related to addressing climate change in groundwater sustainability planning; the first presentation will be provided by Paul Wells, Branch Manager of the California Department of Water Resources, and the second presentation will be provided by Dr. Lisa Micheli, of the Pepperwood Foundation, and Lorraine Flint, USGS Emeritus.

EXECUTIVE SUMMARY

It is known that climate change will impact future water supply and water quality in the Napa Valley Groundwater Subbasin. The Sustainable Groundwater Management Act (SGMA) requires Groundwater Sustainability Plans (GSPs) to include a quantitative analysis of climate change in order to plan for these potential impacts. Two

presentations will be provided; one to overview SGMA requirements for addressing climate change, and a second presentation to explore data and review methods used to assess historical and projected climate, runoff, and recharge patterns for the Napa Valley watershed. A discussion will follow the presentations, whereby the presenters will respond to questions from the planning team and GSPAC members. The objective is to initiate GSPAC discussion and input on priority assumptions and data related to addressing climate change in the Napa Valley Subbasin GSP.

FISCAL & STRATEGIC PLAN IMPACT

Is there a Fiscal Impact? No

County Strategic Plan pillar addressed:

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: The proposed action is not a project as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

BACKGROUND AND DISCUSSION

It is well recognized that climate change will impact future water supply and water quality in the Napa Valley Groundwater Subbasin. The Sustainable Groundwater Management Act (SGMA) requires Groundwater Sustainability Plans (GSPs) to include a quantitative analysis of climate change in order to anticipate and plan for these potential impacts.

The California Legislature declared that “when properly managed, groundwater resources will help protect communities, farms, and the environment against prolonged dry periods and climate change, preserving water supplies for existing and potential beneficial use” (SGMA Uncodified Findings (a)(4)). “SGMA requires incorporation of climate change assumptions into the development of projected water budgets, and for the sustainable management of groundwater basins” (DWR, 2018). GSP Regulations (Title 23 of the California Code of Regulations (23 CCR)) developed by the California Department of Water Resources (DWR) include specific requirements for addressing climate change as part of projected water budgets, as described in §354.18 (see excerpts below). Although climate change is not explicitly referenced elsewhere in the GSP Regulations, there is a requirement to support minimum thresholds established for avoiding seawater intrusion by considering “the effects of current and projected sea level rise” (23 CCR §354.28(c)(3)(B)). In addition, DWR staff have stated that they expect GSP to consider climate change and sea level rise when establishing other sustainable management criteria, when developing GSP monitoring networks, and when developing projects and management actions presented in GSPs.

GSP Regulations Excerpts:

- | “Each Plan shall include a water budget for the basin that provides an accounting and assessment of the total annual volume of groundwater and surface water entering and leaving the basin, including historical, current and projected water budget conditions, and the change in the volume of water stored.” (23 CCR §354.18(a))
- | “Projected water budgets shall be used to estimate future baseline conditions of supply, demand, and aquifer response to Plan implementation, and to identify the uncertainties of these projected water budget

components.” (23 CCR §354.18(c)(3))

- | “Projected hydrology shall utilize 50 years of historical precipitation, evapotranspiration, and streamflow information as the baseline condition for estimating future hydrology. The projected hydrology information shall also be applied as the baseline condition used to evaluate future scenarios of hydrologic uncertainty associated with projections of climate change and sea level rise. (23 CCR §354.18(c)(3)(A))
- | The Agency shall utilize the following information provided, as available, by the Department pursuant to Section 353.2, or other data of comparable quality, to develop the water budget: ... Projected water budget information for population, population growth, climate change, and sea level rise.” (23 CCR §354.18(d)(3))
- | Each Plan shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface water interaction, and subsurface groundwater flow.” (23 CCR §354.18(e))

While DWR provides data and methods to assist GSAs in incorporating climate change assumptions into the development of projected water budgets, other local analyses and methods can be used. In order to advise the GSPAC and the planning team on strategies for addressing climate change in the Napa Valley Subbasin GSP, two presentations will be provided and discussed.

The first presentation will be provided by Paul Wells, Branch Manager, Water Management Branch at the North Central Region Office of DWR. Mr. Well's presentation will provide context around the SGMA and GSP requirements relating to the quantitative analysis of climate change. His presentation will focus on:

- | A brief overview of SGMA and GSPs and methods for incorporating climate change data into the GSP
- | SMGA-related climate change tools and resources and
- | How other GSAs are incorporating climate change into GSPs

A second presentation will be provided by Dr. Lisa Micheli, of the Pepperwood Foundation, and Lorraine Flint, USGS Emeritus. This presentation will review methods used to assess historical and projected climate, runoff, and recharge patterns for the Napa Valley watershed as a part of a 2016 Coastal Conservancy project titled Climate Ready North Bay. The presentation will summarize those results and provide an update on the evolution of the USGS Basin Characterization Model (BCM) as a tool for watershed and groundwater sustainability planning. Dr. Micheli and Ms. Flint will discuss the availability and opportunity to apply Napa Valley-specific data to address climate change in the GSP.

Following the brief presentations, the presenters will respond to questions from the planning team and GSPAC members. The objectives of these presentations are:

- | To brief GSPAC members, GSA staff and the public on the requirements for addressing climate change in the GSP and the availability of Napa-specific data related to climate change and,
- | Based on the presentations, initiate GSPAC discussion to provide input to staff and the planning team on the priority assumptions and data related to addressing climate change in the Napa Valley Subbasin GSP.

Reference:

California Department of Water Resources (DWR). 2018. Resource Guide - DWR-Provided Climate Change Data and Guidance for Use During Groundwater Sustainability Plan Development. Sustainable Groundwater Management Program. July 2018. 12 p. <https://data.cnra.ca.gov/dataset/sgma-climate-change-resources/resource/833a3998-809d-4585-b9e1-462704631934> (accessed 11/5/2020).

SUPPORTING DOCUMENTS

None

Committee Recommendation: Approve

Reviewed By: Jeff Sharp