



County of San Mateo

Inter-Departmental Correspondence

Department: COUNTY MANAGER: OFFICE OF SUSTAINABILITY

File #: 18-637

Board Meeting Date: 8/7/2018

Special Notice / Hearing: None
Vote Required: Majority

To: Honorable Board of Supervisors

From: Jim Eggemeyer, Director, Office of Sustainability
Heather Forshey, Director, Environmental Health Services, Health System

Subject: San Mateo Plain Groundwater Basin Assessment Report

RECOMMENDATION:

Accept this informational report regarding the San Mateo Plain Groundwater Basin Assessment, prepared for the County by EKI Environment & Water, Inc. (EKI).

BACKGROUND:

The San Mateo Plain groundwater basin (Basin) underlies the bayside of the County from approximately Burlingame to the Santa Clara-San Mateo County boundary at San Francisco Creek. During historical periods of high groundwater use from the early 1900s until the Hetch Hetchy line was completed in the 1960s, groundwater levels in the Basin had dropped significantly and negative impacts including seawater intrusion and subsidence were observed. The recent historic drought, coupled with renewed interest in groundwater use within the Basin, has increased local interest in better understanding the Basin, evaluating the extent to which increased groundwater use would impact the Basin, and options for mitigating potential negative impacts. There was a desire to have a more holistic assessment of the Basin combining research and historical data collected by various cities and water agencies within the Basin, as well as water districts and cities outside of San Mateo County, to create a more comprehensive and accurate picture of current conditions and understanding of the Basin.

The County contracted with EKI to comprehensively evaluate the Basin. The San Mateo Plain Groundwater Basin Assessment (Project) began in April 2016 and was completed in July 2018.

The primary objectives of the Project were to:

1. Increase public knowledge by collecting, standardizing, and hosting data and historical studies on the County's website for ease of use by agencies, consultants, and residents;
2. Evaluate hydrogeologic and groundwater conditions, using existing and new data collected during the Project;
3. Identify potential impacts to groundwater from sea level rise and climate change using multiple

- scenarios;
4. Evaluate potential impacts to groundwater quality and quantity from anticipated increased groundwater use due to higher urban demand, water availability uncertainty during extended droughts, and future regulatory drivers; and
 5. Develop potential groundwater management strategies.

DISCUSSION:

Stakeholder Engagement: Throughout all phases of the Project, the County communicated with over 300 stakeholders, and relied on them to help determine the Project's outcome. Stakeholders included numerous private citizens, city public works departments, the San Francisquito Creek JPA, BAWSCA, SFPUC, Santa Clara Valley Water District, Alameda County Water District, and East Bay MUD, among other water districts, SLAC, and several sanitary districts within the Basin.

Nine stakeholder workshops were held throughout the two-year Project. The workshops, widely attended over the course of the Project, with no fewer than 34 stakeholders at every meeting, provided an opportunity for interested stakeholders to be informed of and contribute to Project activities.

In addition, County staff made several presentations to regional groups, including C/CAG and City Councils, introducing the Project, and attended numerous meetings with officials from area public agencies interested in learning more about the Project. Over the course of the Project, the County conducted over 50 meetings and presentations.

Project and Report Highlights:

- Compilation of existing public and private sources of data in the Basin from cities, water agencies, and consultants, and supplemented with newly collected data as part of this study, into a publicly available database on the County's Open Data Portal, which includes nearly 60,000 water level measurements and over 500,000 analytical chemistry records;
- Development of groundwater models for the Basin that examined inflows and outflows (water budget), and calculated the volume of stored groundwater;
- Reconciliation of computer groundwater models regionwide, previously developed by other Bay Area entities, to more accurately evaluate hydrologic interconnections in the Bay area region, and to more accurately predict hydrologic responses to changes in groundwater recharge, pumping, climate change, and sea level rise;
- Evaluation of various formal and informal groundwater management options for the Basin, and water-related projects such as stormwater capture, and other supplemental groundwater recharge options; and
- Evaluation of scenarios due to various changes on groundwater conditions. The scenarios evaluated were based on stakeholder feedback collected at a stakeholder workshop, and included climate change, urban demand pumping increase, and groundwater recharge projects.

Key Findings:

- Available data show that the Basin is currently in a stable and full (i.e., sustainable) state;
- Widely used climate change (sea level rise) scenarios will not significantly alter the Basin's groundwater conditions; and
- Modeled changes due to increased pumping can be appropriately addressed with increasing recharge through targeted projects to avoid undesirable results.

All primary Project objectives were met and discussed extensively in public workshops and as part of the final report. The draft final report was shared with Basin stakeholders for comment and review in June 2018, and presented in July 2018. The complete report can be found at: <http://www.smcsustainability.org/smplain>.

Basin Prioritization and SGMA: Groundwater basins in California are subject to the requirements of the Sustainable Groundwater Management Act (SGMA) if they are designated by the Department of Water Resources (DWR) as a Medium or High priority basin. SGMA requires active management of a community's use of the groundwater within Medium and High priority basins. The initial basin priorities were assigned in June 2014 and all nine basins in San Mateo County, including the San Mateo Plain Groundwater Basin, were ranked Very Low priority by DWR due to a number of factors. However, in May 2018, DWR proposed changing the designation of numerous basins, including that of the San Mateo Plain, the Half Moon Bay Terrace, and the Westside groundwater basins in San Mateo County, due to both newly identified data, and a revised list of components against which basins are evaluated. If, in November 2018, DWR's proposed changes become final, the San Mateo Plain basin's prioritization would change from "Very Low" to "Medium" priority. Half Moon Bay Terrace would change from "Very Low" to "High" priority and the Westside groundwater basin from "Very Low" to "Medium." All three basins will be subject to the requirements of SGMA. SGMA directs key stakeholders within the prioritized basin to establish one or more Groundwater Sustainability Agencies (GSAs) at local cost that would develop and implement a basin-wide Groundwater Sustainability Plan (GSP). In the event stakeholders do not form GSAs, the default will be that the State will have this responsibility. The GSP may affect land use and groundwater use decisions within the basin. The deadlines for both are short: GSA formation by November 2020; GSP development/implementation by November 2023. Local land use and water agencies within the basin may be directed by the State to manage the groundwater to avoid undesirable results such as saltwater intrusion, land subsidence, and degraded water quality, by maintaining sustainable water levels and quality through balanced pumping and recharge. Our departments are working with other County departments and Counsel to understand the opportunities and challenges associated with these requirements.

PERFORMANCE MEASURE:

Measure	FY 2015-16 Actual	FY 2016-17 Actual	FY 2017-18 Actual
Percent of Completion of the groundwater Basin Assessment of the San Mateo Plain Sub-Basin	85%	90%	100%

FISCAL IMPACT:

The San Mateo Plain Groundwater Basin Assessment Project has been funded by **Measure K** and Net County Cost budgeted to the Office of Sustainability.