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Consider receiving the Draft 2022 Annual Groundwater Level Contours and Cumulative Change Chart

RECOMMENDATION:
It is recommended that the Monterey County Water Resources Agency Basin Management Advisory Committee:

Receive the Draft 2022 Annual Groundwater Level Contours and Cumulative Change Chart

SUMMARY/DISCUSSION:
The Monterey County Water Resources Agency (Agency) is responsible for data collection and analysis of groundwater data throughout the Salinas Valley to support the ongoing Groundwater Level contouring, Seawater Intrusion mapping, and other programs related to current groundwater conditions. Conditions are assessed throughout the year to better understand how aquifers are responding during different hydrologic conditions as well as the relative groundwater storage fluctuations that occur on an annual basis. These activities align with Strategic Plan Goals B7, *Use of data and analysis to make informed decisions based on science* and E1, *Improve public outreach to increase transparency, communication, education and information about Agency projects and programs*.

Annual Groundwater Level Survey - (Program No. 21 Groundwater Level Monitoring - annual and No. 23 Groundwater monitoring of dedicated wells)

In the latter part of each fall, from mid-November through December, the Agency samples groundwater levels in approximately 450 wells throughout the Salinas Valley, from the San Ardo oilfields to the coast. The timing of this sampling survey allows us to capture conditions in the groundwater basin at a time when a relative lull in agricultural pumping causes groundwater level troughs to relax, prior to the influence of seasonal recharge in response to winter/spring precipitation. In this way, the Annual survey of groundwater level data is an assessment of the relative, year-to-year change in groundwater storage throughout the valley.

The 2022 Annual contours for the 180-Foot, East Side Shallow, Forebay and Upper Valley Aquifers are included as Attachment A. Compared to the 2021 survey, there was a decline in groundwater levels of 1-3 feet near the coast, meaning groundwater elevations remained below sea level. The East Side trough widened on the northern and southern lobes of the trough but didn't deepen from where it was in 2021. Groundwater elevations in the area south of Salinas to Greenfield fell by 7-10 feet, and

by 10-14 feet from Greenfield to San Lucas. South of San Lucas however, groundwater levels were generally within a foot of where they were last year.

The 2022 Annual contours for the 400-Foot and East Side Deep Aquifers are included as Attachment B. Near the coast, groundwater levels were 1-3 feet lower than levels last year and remained below sea level at the coast. The East Side trough widened on the northern and southern lobes of the trough but didn't fall below -70 ft-msl. Groundwater elevations in the area south of Salinas to Gonzales were 6-9 feet lower than levels in 2021.

Cumulative Groundwater Level Change Chart

The Cumulative Change Chart is an additional product produced from the Annual Groundwater Level Survey. This is a cumulative summary of the average change between each annual survey, calculated for each subarea, which helps to give an idea of the groundwater storage changes and trends seen over time. For 2022, all four of the major subareas showed a decline in groundwater levels from the 2021 survey. Water Year 2022 was a dry-normal year, and the third year of the current drought. The degree of change was twice as large as the declines seen over last two years, which is a similar pattern as what was observed in the 2012-2016 drought. The Cumulative Change Chart for 1944-2022 is included as Attachment C with a more detailed summary of the changes in Attachment D.

OTHER AGENCY INVOLVEMENT:

None.

FINANCING:

There is no financial impact in receiving this report. Activities associated with this program are included in Funds 111 & 116 of the FY 22-23 budget.

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Attachments:

Attachment A: Annual 2022 Groundwater Elevation Contours, 180-Ft and East Side Shallow, Forebay and Upper Valley Aquifers

Attachment B: Annual 2022 Groundwater Elevation Contours, 400-Ft and East Side Deep Aquifers

Attachment C: Cumulative Groundwater Level Change Chart, 1944-2022

Attachment D: Summary of Annual Groundwater Level Changes, 2021 to 2022