



# STAFF REPORT

**TO:** Butte County Water Commission

**FROM:** Department of Water and Resource Conservation staff on behalf of the Technical Advisory Committee.

**SUBJECT:** Summary Report of TAC Review and Findings of Spring groundwater levels

**DATE:** April 16, 2007

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## **BACKGROUND**

On April 10, 2007, the Board of Supervisors (Board) adopted the 2007 Basin Management Objectives (BMOs), which define acceptable groundwater elevations, groundwater quality, and land subsidence. In accordance with Chapter 33A of the Butte County Code, this countywide groundwater management document was prepared and brought forward to the Board of Supervisors by members of the Water Advisory Committee with full support from the Water Commission. This document is to be reviewed and revised on an annual basis by the sub-inventory unit stakeholders and the Water Advisory Committee (WAC), and refined as necessary to accommodate changes in the level of understanding of the groundwater resource. In the event that a non-compliance is identified by Water and Resource Conservation staff, the Technical Advisory Committee (TAC) is charged with reviewing the extent and magnitude of the non-compliance and reporting their findings to the WAC and the Water Commission.

## **DISCUSSION**

The chosen groundwater level monitoring network consists of selected wells representative of each sub-inventory unit. The Department of Water Resources (DWR) and Water and Resource Conservation staff share the responsibility of monitoring groundwater levels four times a year. The Spring measurements are taken by DWR, and this year, those measurements were taken the week of March 19-23, and made publicly available two weeks later. California Water Service took Spring level measurements in the Chico area on April 11<sup>th</sup>. The TAC

met to review the Spring level measurements on April 12, 2007 and reviewed the data indicating that there were 18 wells that had reached an Alert Stage, five of which are California Water Service wells.

Chapter 33A §13 defines how the TAC is to investigate and report on identified or alleged non-compliance. First, the BMOs must be established and approved by the Board of Supervisors in order for there to be a review. Upon reviewing the pertinent hydrologic data, the TAC is to recommend actions to resolve the BMO non-compliance to Water and Resource Conservation staff, the WAC, and the Water Commission. Groundwater management action for an Alert Stage 1 non-compliance, as currently defined in the 2007 BMO document, is informational only.

Due to the fact that the winter season of 2006/2007 produced less than half of the average rainfall totals, the groundwater levels reflect a lowering throughout the basin. Similar situations exist in Colusa, Glenn and Tehama Counties. Many of the wells that are classified in the Stage 1 Alert are at, or less than one percent different from the established Alert level.

Stage 3 Alert protocol requires a more in depth review of potential influencing factors. There are three wells that are in Stage 3 Alert. Again, the TAC determined that lower than average rainfall was the foremost factor in this phenomenon. For SWN 17N02E19J01, the TAC reviewed data on the surrounding wells and reviewed common irrigation practices in the Butte Sink sub-inventory unit. There were no other non-compliances. The likely cause for this well is one of a statistical nature. To date, there is still not a WAC Representative for the Butte Sink sub-inventory unit, and therefore the 2007 BMO was prepared by staff for this sub-inventory unit. Therefore, the TAC recommended that staff review the methodology chosen for establishing the Spring Alert Levels in the BMO for this sub-inventory unit. For SWN 20N02E09L01 and SWN 21N02E20P01, the TAC noted that they are in an area that historically records greater groundwater level fluctuations. In addition, parts of the Esquon sub-inventory unit are now included in the Durham cone of depression that has steadily been increasing due to increased growth. The TAC directed staff to contact the WAC Representatives in the Durham and Esquon sub-inventory units to gather data on how the low rainfall totals may have affected ag practices and in turn, groundwater levels.

#### **RECOMMENDATION**

At this time, the TAC feels that the WAC and Water Commission should be made aware of the non-compliance, but keep in mind the precipitation deficiency of this year when reviewing the hydrographs or tabular data. For the wells that are in a Stage 3 Alert Level, staff has been directed to re-evaluate the chosen methodologies for setting the Alert Levels. Next, discussions with sub-inventory WAC Representatives should be initiated to gain further information on ag practices during this period of low rainfall. Staff will then work to disseminate

information on the non-compliances as defined in Chapter 33A §13. The Spring elevation measurements will be available in hydrograph and tabular format on the Water and Resource Conservation website. Staff will coordinate with sub-inventory representatives and the WAC on how best to proceed with gathering additional data to review with the TAC.