Basin Conditions

Six Indicators of Groundwater Sustainability Under SGMA

1) Groundwater Elevations

Groundwater elevation levels are well documented by a number of monitoring agencies, including San Joaquin County and the California Statewide Groundwater **Elevation Monitoring (CASGEM) Program.**

Groundwater elevation levels have declined in recent decades due to increased pumping activity. Currently, a "cone of depression" exists in the central portion of the Subbasin, where elevations are at their lowest (-40 to -76 ft. below sea level).

2) Groundwater Storage

The Eastern San Joaquin Subbasin has large amounts of fresh groundwater stored in its aquifers – over 50 million acre-feet, or enough to theoretically sustain the basin for centuries. However, as groundwater elevations decline, it will become increasingly difficult and expensive to reach this water.

3) Water Quality

Salinity contamination of freshwater wells (shown here as a function of total dissolved solids, or TDS*) is a concern in some areas of the Subbasin. These areas are primarily located in the western half of the Subbasin.

There are three primary sources of salinity:

- **Dissolution of salts from Delta sediments**
- Irrigation return water from agricultural soils
- **Contributions from underlying deep deposits**

***TDS** is a measurement of dissolved ions in water, including major salt ions such as sodium and chloride. In groundwater, TDS is typically approximately equal to salinity.

Current Groundwater Elevations (ft.)





4) Seawater Intrusion

Direct seawater intrusion does not occur in the Subbasin. Salinity will be addressed via the water quality sustainability indicator.

5) Land Subsidence

Subsidence potential exists in a small portion of the Subbasin where there is pumping from below the Corcoran Clay layer. Corcoran Clay refers to a specific clay unit that underlies a large portion of the Central Valley. It acts as a significant confining layer up to 60 feet thick above a deep pressurized aquifer. It is susceptible to irreversible compaction when water is pumped out, causing subsidence.

The extent of the area with subsidence potential is limited to the lower western corner of the Subbasin. Groundwater elevations in this area are typically high compared to the rest of the basin, and land subsidence is not likely.

6) Depletion of Interconnected Surface Waters

If the water table adjacent to a river or stream goes down as a result of groundwater pumping, the river or stream may "lose" water to the underlying aquifer. Major river systems in the Subbasin are highly managed to meet instream flow requirements for fisheries, water quality standards, and water rights of users downstream. Streams identified as losing streams will be managed to protect against significant and unreasonable stream depletion.











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