

Kelso Lander Valley Groundwater Basin

- Groundwater Basin Number: 6-69
- County: Kern
- Surface Area: 11,200 acres (17.5 square miles)

Basin Boundaries and Hydrology

The Kelso Lander Valley Groundwater Basin underlies a northwest-trending valley in eastern Kern County. Surface elevations range from 3,600 feet in the south, to about 5,000 feet above mean sea level in the north. The basin is bounded by nonwater-bearing crystalline rocks of the southern Sierra Nevada. Peaks on the north, east, and southeast reach elevations of about 6,000 feet and Sorell Peak on the west exceeds 7,700 feet above mean sea level (DWR 1964; USGS 1972a,b).

Annual rainfall ranges from 6 to 12 inches. The valley is drained by Cottonwood Creek which flows south through Jawbone Canyon into Fremont Valley (DWR 1964).

Hydrogeologic Information

Water Bearing Formations

Quaternary alluvium comprises the principal water-bearing unit within the basin. This includes unconsolidated younger alluvial deposits and underlying unconsolidated to poorly consolidated older alluvial deposits. The maximum thickness of the alluvium is at least 125 feet (DWR 1964).

Recharge and Discharge Areas

Recharge is primarily from the percolation of runoff from the surrounding watershed through alluvial fan deposits. Additional sources of recharge include subsurface inflow and the infiltration of precipitation that falls to the valley floor. Groundwater moves, as does the surface runoff, south towards Jawbone Canyon (DWR 1964).

Groundwater Level Trends

Unknown.

Groundwater Storage

Groundwater Storage Capacity. Unknown.

Groundwater in Storage. Unknown.

Groundwater Budget (C)

Groundwater budget information is not available.

Groundwater Quality

Characterization. Character of the groundwater varies with the predominant cations typically calcium and sodium and the predominate anions typically bicarbonate and sulfate (DWR 1964).

Impairments. The groundwater is ranked marginal to inferior for domestic use because of elevated fluoride concentrations that have varied from 0.9 to 2.3 mg/L. TDS content ranges from 360 to 1,300 mg/L; however, the groundwater is suitable for most irrigation uses (DWR 1964).

Well Production characteristics

Well yields (gal/min)	
Municipal/Irrigation	
Total depths (ft)	
Domestic	
Municipal/Irrigation	

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
Department of Health Services and cooperators	Groundwater levels	
	Miscellaneous water quality	
	Title 22 water quality	

Basin Management

Groundwater management:	
Water agencies	
Public	
Private	

References Cited

- California Department of Water Resources (DWR). 1964. *Ground Water Occurrence and Quality Lahontan Region*. Bulletin 106-1. 439 p.
- U. S. Geological Survey. 1972a. *Cross Mountain, California*. 7.5' Quadrangle. Scale 1: 24,000.
- U.S. Geological Survey. 1972b. *Pinyon Mountain, California*. 7.5' Quadrangle. Scale 1 : 24,000.

Errata

Changes made to the basin description will be noted here.