

Riggs Valley Groundwater Basin

- Groundwater Basin Number: 6-23
- County: San Bernardino
- Surface Area: 87,700 acres (137 square miles)

Basin Boundaries and Hydrology

Riggs Valley Groundwater Basin underlies a northeast-trending valley in northern San Bernardino County. Surface elevation of the valley floor ranges from 750 feet above mean sea level at Riggs (dry) Lake to about 2,500 feet along the valley's margins. The basin is bounded by nonwater-bearing consolidated rocks of the Avawatz Mountains on the west, the Silurian Hills on the east, and the Soda Mountains on the south. The northern boundary of the basin is approximated as a surface divide developed where fan deposits extend from the Avawatz Mountains on the west meeting those extending from the Silurian Hills on the east. Elevations in the Avawatz Mountain exceed 6,200 feet while in the Soda Mountains elevations reach about 3,500 feet (DWR 1964).

Annual rainfall ranges from 4 to 6 inches. Runoff from the surrounding mountains drains to Riggs Lake in the north-central portion of the basin. Excess runoff to Riggs Lake spills north to Salt Creek and into Silurian (dry) Lake (DWR 1964).

Hydrogeologic Information

Water Bearing Formations

Quaternary alluvium forms the principal water-bearing unit within the basin. This includes unconsolidated younger alluvial deposits and underlying unconsolidated to poorly consolidated older alluvial deposits (DWR 1964). The thickness of water-bearing deposits is estimated at about 200 feet (DWR 1975)

Recharge and Discharge Areas

Replenishment to the basin is derived chiefly from the percolation of runoff from the surrounding mountains and subsurface inflow from adjoining Silver Lake Valley Groundwater Basin on the east. Flood waters of the Mojave River, on rare occasions, discharge to the basin when Silver (dry) Lake overflows. Alluvial fan deposits of the Avawatz and Soda Mountains serve as the principal areas for the percolation of runoff. Groundwater in the younger and underlying older alluvium probably moves north into the Valjean Valley Groundwater Basin (DWR 1964).

Groundwater Level Trends

Water level information is not available.

Groundwater Storage

Groundwater Storage Capacity. The estimated total storage capacity is about 1,190,000 af, (DWR 1975).

Groundwater in Storage. Unknown.

Groundwater Budget (C)

Groundwater budget information is not available.

Groundwater Quality

Characterization. Unknown, however the chemical character of groundwater in adjacent groundwater basins both up and down gradient is sodium chloride (DWR 1964).

Impairments. Because there are no wells in this basin, the groundwater quality is unknown. However, analyses from basins up gradient and down gradient may provide insight into the quality of water in the Riggs Valley Groundwater Basin. Groundwater from Silver Lake Valley Groundwater Basin and Riggs Valley Groundwater Basin have high concentrations of fluoride, chloride, and TDS (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 No.106-1. 439 p.

_____. 1975. *California's Ground Water*. Bulletin No. 118. 135 p.

Jennings C. W. *et al.* 1962. *Geologic Map of California: Trona Sheet*. Olaf P. Jenkins Edition.
California Department of Conservation, Division of Mines and Geology. Scale 1:
250,000.

Errata

Substantive changes made to the basin description will be noted here.