Lower Kingston Valley Groundwater Basin

- Groundwater Basin Number: 6-21
- County: San Bernardino
- Surface Area: 240,000 acres (375 square miles)

Basin Boundaries and Hydrology

Lower Kingston Valley Groundwater Basin (DWR 1975), formerly referred to as the Valjean Valley Groundwater Basin (DWR 1964), underlies a northwest trending valley in north central San Bernardino County. Surface elevation of the valley floor ranges from about 3,000 feet above mean sea level along the eastern margin to about 500 feet at Salt Spring along the western margin. The basin is bounded by nonwater-bearing, consolidated rocks of the Kingston Range and Dumont Hills on the north, the Shadow Mountains on the east, the Avawatz Mountains on the west, and the Silurian Hills on the southeast. Portions of the northern and eastern boundaries consist of surface drainage divides. Merging fan deposits extending from the Avawatz Mountains on the west and Silurian Hills on the east form the southern boundary. Kingston Peak attains an elevation of 7,328 feet, while other surrounding mountains range from about 2,500 to 5,000 feet (DWR 1964).

Average annual precipitation ranges from 4 to 8 inches. Runoff from the surrounding mountains drains towards Salt Creek, which flows northwest across the valley. Kingston Wash conveys runoff west from the adjacent Upper Kingston Valley, discharging into Salt Creek. Salt Creek discharges from the valley to the west into the Amargosa River which flows into Death Valley (Jennings 1961; Jennings and others 1962).

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. Maximum thickness of the alluvium is at least 425 feet (DWR 1964).

Recharge and Discharge Areas

Replenishment of the basin is derived from the percolation of runoff from the surrounding mountains, infiltration of precipitation that falls to the valley floor, and subsurface inflow from RiggsValley Groundwater Basin on the south and Upper Kingston Valley Groundwater Basin on the east. Groundwater in the younger and underlying older alluvium moves, as does surface runoff, towards the western part of the basin prior to discharging as outflow to Death Valley Groundwater Basin (DWR 1964).

Groundwater Level Trends

No wells are known to exist in the basin.

Groundwater Storage

Groundwater Storage Capacity. Total storage capacity is estimated at about 3,390,000 af (DWR 1975).

Groundwater in Storage. Unknown.

Groundwater Budget (Type C)

Groundwater budget information is not available.

Groundwater Quality

Characterization. The character of the basin's groundwater is based on chemical analyses of water from Salt Spring located near the western margin of the basin. The character of the water is sodium chloride.

Impairments. The basin's groundwater is rated inferior for both domestic and irrigation purposes because of elevated concentrations of fluoride, chloride, boron, sulfate, and TDS. Analyses show that between 1918 and 1961, TDS content ranged from 5,385 to 8,540 mg/L (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
	Groundwater levels	
	Miscellaneous water quality	
Department of Health Services and cooperators	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.

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Jennings C. W. 1961. *Geologic Map of California: Kingman Sheet*. Olaf P. Jenkins Edition. California Department of Conservation, Division of Mines and Geology. Scale 1: 250,000.

Jennings C. W., J. L. Burnett, and B. W. Troxel. 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.