

## Leach Valley Groundwater Basin

- Groundwater Basin Number: 6-27
- County: San Bernardino
- Surface Area: 61,300 acres (95.8 square miles)

### Basin Boundaries and Hydrology

Leach Valley Groundwater Basin underlies an east-trending valley in north-central San Bernardino County. Surface elevation of the valley floor ranges from 1,921 feet above mean sea level at Leach (dry) Lake to about 2,500 feet. The basin is bounded by nonwater-bearing consolidated rocks of the Owshead, Quail, and Avawatz Mountains on the north, and the Granite Mountains on the south. Alluvial ridges form the eastern and western boundaries of the basin. Elevations in the surrounding mountains range from 4,474 feet in the Granite Mountains to about 5,100 feet in the Quail Mountains (DWR 1964).

Average annual precipitation ranges from 4 to 8 inches. Runoff from the surrounding mountains, generated from occasional storm events, flows toward Leach Lake in the central portion of the valley (Jennings and others 1962; 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).

#### ***Restrictive Structures***

The Leach Lake fault, a splay of the east-west trending Garlock fault zone, impedes the flow of groundwater beneath Leach Lake. The northern part of the playa remains moist at the surface, while the southern part remains dry (DWR 1964).

#### ***Recharge and Discharge Areas***

Leach Valley has internal drainage and recharge to the basin is derived chiefly from the percolation of surface runoff through alluvial fan deposits at the base of the Quail and Granite Mountains. Groundwater in the younger and underlying older alluvium moves towards Leach Lake (DWR 1964).

#### ***Groundwater Level Trends***

There are no known wells in the basin, but depth to water on the moist north side of Leach Lake is probably less than 10 feet (DWR 1964).

#### ***Groundwater Storage***

**Groundwater Storage Capacity.** Total storage capacity is estimated at about 650,000 af (DWR 1975).

**Groundwater in Storage.** Unknown.

### **Groundwater Budget (C)**

Groundwater budget information is not available.

### **Groundwater Quality**

**Characterization.** The only available groundwater quality data is from three developed springs located along the southern margin of the basin. Analyses indicate that the character of the water varies, but the most often occurring cation is sodium with the predominate anion as chloride.

**Impairments.** Analyses show that the water from Leach Spring, Desert King Spring, and Two Springs are marginal or inferior for domestic use because of high fluoride concentrations. Water from Two Springs is also inferior for irrigation due to high sodium content. TDS content ranged from 308 to 698 mg/L (DWR 1964).

### **Well Production Characteristics**

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

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### **Active Monitoring Data**

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

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### **Basin Management**

Groundwater management:

Water agencies

Public

Private

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### **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., John L. Burnett, and Bennie 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.