Denning Spring Valley Groundwater Basin

- Groundwater Basin Number: 6-78
- County: San Bernardino
- Surface Area: 7,240 acres (11.3 square miles)

Basin Boundaries and Hydrology

Denning Springs Valley Groundwater Basin underlies a small northwest-trending valley in north-central San Bernardino County. Surface elevation of the valley floor ranges from about 5,400 feet above mean sea level along the southern margins and slopes to about 1,600 feet in the northwest. The basin is bounded by nonwater-bearing consolidated rocks of the Avawatz Mountains, which encircle the basin except on the northwest. Elevation in the surrounding mountains reaches a maximum of about 6,000 feet (DWR 1964). Annual precipitation ranges from 4 to 6 inches. Runoff from the surrounding mountains drains to the northwest into Death Valley (Jennings and others 1962; USGS 1985).

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).

Recharge and Discharge Areas

Recharge to the basin is derived chiefly from the percolation of runoff through alluvial fan deposits at the base of the Avawatz Mountains. Groundwater in the younger and underlying older alluvium moves, as does the surface flow, towards the northwest and discharges to Death Valley Groundwater Basin (DWR 1964).

Groundwater Level Trends

The basin has few wells with recorded water level measurements; however, water levels at Denning Spring in the northwest part of the basin, remained within four feet of the ground surface from 1917 through 1953 (DWR 1964). Depth to water at two nearby wells measured 5 and 15 feet below the surface in the winter of 1967.

Groundwater Storage

Groundwater Storage Capacity. Unknown.

Groundwater in Storage. Unknown.

Groundwater Budget (C)

Groundwater budget information is not available.

Groundwater Quality

Characterization. Groundwater quality is based on chemical analyses from two developed springs. Denning Springs, in the northwest part of the basin, is calcium-sodium bicarbonate in character. Cave Springs, in the south part of the basin, has a calcium bicarbonate-sulfate character (DWR 1964).

Impairments. The basin's groundwater is rated marginal to inferior for domestic use because of elevated levels of fluoride found in samples from both springs. However, the groundwater is suitable for most irrigation purposes. TDS content is about 450 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.

_____. 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.

U.S. Geological Survey (USGS). 1985. *Avawatz Pass, California*. 7.5' Quadrangle. Provisional Edition. Scale 1: 24,000.

Errata

Changes made to the basin description will be noted here.