

Brown Mountain Valley Groundwater Basin

- Groundwater Basin Number: 6-76
- County: San Bernardino
- Surface Area: 21,700 acres (33.9 square miles)

Basin Boundaries and Hydrology

Brown Mountain Valley Groundwater Basin underlies a north-trending valley in northwest San Bernardino County. Surface elevation of the valley floor ranges from 1,800 to about 1,970 feet above mean sea level (USGS 1984). The basin is bounded by nonwater-bearing, consolidated rocks of the Panamint Mountains on the east and northeast, the Quail Mountains on the southeast, and the Slate Range on the west and southwest. Brown Mountain on the east side of the valley attains an elevation of 5,131 feet, and several peaks in the Slate Range reach elevations exceeding 5,000 feet. The basin lies within the China Lake U. S. Naval Air Weapons Center (DWR 1964).

Annual average rainfall ranges from 4 to 6 inches. Runoff from the surrounding mountains drains to the central part of the valley and flows north into Panamint Valley (DWR 1964).

Hydrogeologic Information

Water Bearing Formations

Quaternary alluvium forms the principal water-bearing unit within the basin. Included in this unit are the unconsolidated younger alluvial deposits and underlying unconsolidated to poorly consolidated older alluvial deposits (DWR 1964).

Restrictive Structures

A buried bedrock ridge at the northern end of the basin may partially impede groundwater outflow to the Panamint Valley Groundwater Basin (DWR 1964).

Recharge and Discharge Areas

Recharge to the basin occurs primarily from the percolation of occasional runoff through alluvial fan deposits at the base of the Slate Range, Panamint, and Quail Mountains. Minor amounts of recharge may also be derived from the infiltration of rain that falls on the valley floor and subsurface inflow from Pilot Knob Valley. Groundwater moves north towards Panamint Valley

Groundwater Basin. (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. Samples of groundwater were collected in 1918 from two springs located on the west side of the basin. The analyses indicated the groundwater was suitable for most domestic and irrigation purposes. The sample from Lone Willow Spring showed a sodium bicarbonate character and TDS content of 962 mg/L. The sample taken from Early Spring had a calcium bicarbonate character and TDS content of 652 mg/L (DWR 1964; 1969).

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. p. 433-435.
- _____. 1969. *Water Wells and Springs in the Panamint, Searles, and Knob Valleys*. Bulletin No. 91-17. 110 p.
- _____. 1975. *California's Ground Water*. Bulletin No. 118. p. 82-83.
- 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.
- U.S. Geologic Survey. 1984. *Windgate Pass, California. Provisional Edition*. 7.5' Quadrangle. Scale 1: 24,000.

Errata

Changes made to the basin description will be noted here.