Means Valley Groundwater Basin

- Groundwater Basin Number: 7-17
- County: San Bernardino
- Surface Area: 15,000 acres (23.4 square miles)

Basin Boundaries and Hydrology

This groundwater basin underlies Means Valley in southcentral San Bernardino County. The basin is bounded by nonwater-bearing rocks and a drainage divide on the north, by a drainage divide on the south, by the Johnson Valley fault on the west, and by the Homestead Valley fault on the east (Rogers 1967). Drainage is to Means (dry) Lake in the central part of the valley (Rogers 1967; French 1978). Annual average precipitation ranges from about 4 to 8 inches.

Hydrogeologic Information

Water Bearing Formations

Groundwater in the basin is found in Quaternary age alluvial and lacustrine deposits. The alluvium likely consists of unconsolidated, fine- to coarse-grained sand, pebbles, and boulders with variable amounts of silt and clay and is probably not more than 200 or 300 feet thick (French 1978).

Restrictive Structures

The southwest trending Johnson Valley and Homestead Valley faults are partial barriers to groundwater movement (Moyle 1974; French 1978).

Recharge Areas

The principal source of recharge to the basin is likely percolation of runoff from surrounding mountains, with a minor contribution from percolation of precipitation to the valley floor and subsurface flow across the Johnson Valley fault southwest of Means Lake. Groundwater may migrate through fractures in bedrock toward Emerson Lake as subsurface outflow (French 1978).

Groundwater Level Trends

A hydrograph for a well in the southern part of the basin indicates stable water levels during 1975 through 1998, varying about one foot in elevation.

Groundwater Storage

Groundwater Storage Capacity. The total storage capacity is estimate at 260,000 (DWR 1975).

Groundwater in Storage. Unknown.

Groundwater Budget (Type C)

Natural recharge is estimated at 100 af/yr (DWR 1975).

Groundwater Quality

Characterization. Groundwater near Means Lake is sodium chloride-bicarbonate in character (French 1978). Groundwater samples show that

TDS content is about 1,300 mg/L, fluoride content is about 4.5 mg/L, and nitrate content is about 92 mg/L (French 1978).

Impairments. Fluoride, nitrate, and TDS concentrations are impairments locally.

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
USGS	Groundwater levels	1
	Miscellaneous water quality	NKD
DHS and cooperators	Title 22 water quality	0

Basin Management

Groundwater management:

Water agencies

Public	Bighorn-Desert View Water Agency, County Service Area 70.
Private	

References Cited

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Moyle, W.R., Jr. 1974. Geohydrologic map of southern California: U.S. Geological Survey Water-Resources Investigations Report 48-73.

Rogers, T. H. 1967. *Geologic Map of California, San Bernardino Sheet*. Single Map Sheet, Scale 1:250,000.

Additional References

California Department of Water Resources (DWR). 1954. *Ground Water Occurrence and Quality Colorado River Basin Region*. Water Quality Investigations Report No. 4.

Riley, F. S. 1956. *Data on Water Wells in Lucerne, Johnson, Fry and Means Valleys, San Bernardino County, California.* U.S. Geological Survey Open-File Report.

United States Bureau of Reclamation (USBR). 1967. *Interim Report, Inland Basins Projects Morongo-Yucca Upper Coachella Valley, California.* Unnumbered Reconnaissance Investigation.

Errata

Changes made to the basin description will be noted here.