Red Pass Valley Groundwater Basin

- Groundwater Basin Number: 6-24
- County: San Bernardino
- Surface Area: 96,500 acres (151 square miles)

Basin Boundaries and Hydrology

Red Pass Valley Groundwater Basin underlies an alluvial valley in north-central San Bernardino County. Surface elevation of the valley floor ranges from about 1,860 feet above mean sea level at Red Pass (dry) Lake to approximately 4,000 feet at the northern end of the valley. The basin is bounded by nonwater-bearing consolidated rocks of the Granite Mountains on the north, the Avawatz Mountains on the northeast and east, the Soda and Tieford Mountains on the south, and by a buried bedrock ridge and low hills on the west. Elevations in the Avawatz Mountains exceed 5,300 feet, whereas other surrounding ranges reach between 2,300 and 3,900 feet (DWR 1964). The valley lies largely within Fort Irwin National Training Center.

Average annual precipitation ranges from 4 to 8 inches. Runoff from the southern portion of the valley flows to Red Pass Lake; runoff from the north, west, and eastern portion of the valley discharges through Red Pass and into the Silurian Valley on the northeast (Jennings and others 1962; USGS 1983, 1986).

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 500 feet (DWR 1964).

Recharge and Discharge Area

Replenishment of the basin is derived chiefly from the percolation of runoff through alluvial fan deposits at the base of the Avawatz and Soda Mountains. Groundwater in the younger and underlying older alluvial deposits moves in the direction of Red Pass Lake and may discharge as outflow to the west into Cronise Valley Groundwater Basin (DWR 1964).

Groundwater Level Trends

A single depth to water measurement was made at a test well in 1944 in connection to water availability for Fort Irwin National Training Center. At that time the depth to water was 368 feet. A hand dug well was reported dry to a depth of 65 feet (DWR 1964).

Groundwater Storage

Groundwater Storage Capacity. Total storage capacity is estimated to be about 870,000 af (DWR 1975).

Groundwater in Storage. Unknown.

Groundwater Budget (C)

Groundwater budget information is not available.

Groundwater Quality

Characterization. Unknown.

Impairments. Unknown.

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., 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. 1983. *West of Baker, California.* 7.5' Quadrangle. Provisional Edition. Scale 1: 24,000.

_____. 1986. *Red Pass Lake, California*. 7.5' Quadrangle. Provisional Edition. Scale 1: 24,000.

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Errata

Substantive changes made to the basin description will be noted here.