

Vandeventer Flat Groundwater Basin

- Groundwater Basin Number: 7-63
- County: Riverside
- Surface Area: 6,750 acres (10.5 square miles)

Basin Boundaries and Hydrology

This basin underlies Vandeventer Flat and Burnt Valley in southern Riverside County. The basin is bounded by nonwater-bearing rocks of the San Jacinto and Santa Rosa Mountains on the east and north, and of Buck Ridge on the southwest. The San Jacinto fault zone bounds the basin on the west, Buck Ridge fault bounds the southwest, and a drainage divide on the northwest is the boundary with Hemet Lake Valley Groundwater Basin. The northern part of Vandeventer Flat drains northward through Palm Canyon toward the Coachella Valley, whereas the southern portion drains southeastward through Horse Canyon toward Collins and Borrego Valleys. Hamilton Creek drains Burnt Valley northwestward. Annual precipitation ranges from about 12 to 16 inches.

Vandeventer Flat Groundwater Basin, in this report, is the northwestern portion of the Buck Ridge Fault Valley Groundwater Basin of Bulletin 118-75 (DWR 1975). This new basin is separated from Buck Ridge Fault Valley Groundwater Basin because the unconsolidated alluvial deposits of these two basins are separated by outcrop of nonwater-bearing crystalline rocks, as depicted by Rogers (1965).

Hydrogeologic Information

Water Bearing Formations

Holocene alluvium and Pleistocene age terrace and nonmarine sedimentary deposits are mapped as the surficial deposits in this valley (Rogers 1965). Water-bearing materials of this basin probably consist of alluvium composed of boulders, gravel, sand, silt, and clay.

Restrictive Structures

The San Jacinto fault zone and the Buck Ridge fault bound the western and southwestern parts of the basin and Buck Ridge fault cuts alluvium between Vandeventer Flat and Burnt Valley (Rogers 1965). However, it is unknown whether or not these faults impede groundwater flow in the basin.

Recharge Areas

Recharge to the basin is likely from percolation of runoff from the surrounding mountains through alluvial fans and stream channels.

Groundwater Level Trends

Two wells show water level elevations increasing by as much as 35 feet during the 1980s. Another well shows seasonal fluctuations in the 1980s of about 35 feet.

Groundwater Storage

Groundwater Storage Capacity. Unknown.

Groundwater in Storage. Unknown.

Groundwater Budget (Type C)

Budget information is not available.

Groundwater Quality

Characterization. Analysis of water from a well in Burnt Valley shows calcium bicarbonate character and TDS content of 217 mg/L. Analysis of a spring adjacent to the southern part of the basin shows sodium-calcium bicarbonate character and TDS content of 109 mg/L.

Impairments. None known.

Well Characteristics

Well yields (gal/min)		
Municipal/Irrigation	Range: – 50 gal/min	Average: 17 gal/min (Well Completion Reports)
Total depths (ft)		
Domestic	Range: to 450 ft	Average: 300 ft. (Well Completion Reports)
Municipal/Irrigation	Range: to 140 ft	Average:

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

Rogers, T. H. 1965. *Geologic Map of California: Santa Ana 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.