Ventura River Valley Groundwater Basin, Lower Ventura River Subbasin

- Groundwater Basin Number: 4-3.02
- County: Ventura
- Surface Area: 5,300 acres (8.3 square miles)

Basin Boundaries and Hydrology

The Lower Ventura River Subbasin is bounded on the north by the Upper Ventura River Subbasin, on the south by the Pacific Ocean and Mound Subbasin of the Santa Clara River Valley Groundwater Basin, and elsewhere by near impervious rocks of the Santa Ynez Mountains (DPW 1933; Panaro 2000). The valley is drained by Canada Larga and the Ventura River. Average annual precipitation ranges from 14 to 16 inches.

Hydrogeologic Information

Water Bearing Formations

Groundwater is found in alluvium of Holocene and Pleistocene age and the San Pedro Formation of Pleistocene age. Groundwater in the basin is unconfined (Panaro 2000). The estimated average specific yield of the basin is 8 percent (CSWRB 1953).

Alluvial Deposits. The alluvium of Holocene and Pleistocene age consists of sand, gravel, and clay. The deposits range from 60 to 100 feet thick beneath the floor of the Ventura River Valley (CSWRB 1953).

San Pedro Formation. The San Pedro Formation consists of gravel, sand, silt, and clay, which near the river mouth is at least partially hydraulically isolated from the Holocene alluvium by relatively impervious material (CSWRB 1953).

Recharge Areas

The basin is recharged by percolation of Ventura River water, precipitation to the valley floor, and irrigation return flow and by subsurface inflow from the Upper Ventura River Subbasin (Panaro 2000).

Groundwater Level Trends

Groundwater moves southward following the course of the Ventura River to the Pacific Ocean. During 1948 through 1956, groundwater levels in one well fluctuated about 25 feet and experienced flowing conditions in 1950 and 1954 (Panaro 2002).

Groundwater Storage

Groundwater Storage Capacity. The total storage capacity is estimated at 264,000 af (Panaro 2000; VCPWA 2002).

Groundwater in Storage. Unknown.

Groundwater Budget (Type A)

Estimates of recharge include underflow of 1,100 af/yr and irrigation return of less than 100 af/yr (Panaro 2000). Extractions are estimated to be less than 400 af/yr (Panaro 2000).

Groundwater Quality

Characterization. Groundwater in the basin is sodium bicarbonate in character. Water from 2 public supply wells has an average TDS content of 772 mg/L in the basin with a range from 760 to 784 mg/L. However, TDS content can range from 1,100 to 3,000 mg/L during extended dry spells (VCPWA 1996).

Impairments. Hydrogen sulfide gas has been reported in the water, particularly during periods when water levels are lowest (DWR 1959). Oil has also been found in the water (DWR 1959). High sulfate and nitrate minerals are common along the shallow alluvium drainage courses where most remaining water wells are found (VCPWA 1996).

Well Characteristics

	Well yields (gal/min)	
Municipal/Irrigation	Range:	Average: 20 gal/min (Panaro 2000)
	Total depths (ft)	
Domestic	Range:	Average:
Municipal/Irrigation	Range:	Average:

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
Department of Health Services and cooperators	Title 22 water quality	2

Basin Management

Groundwater management:

Water agencies

Public	Ventura County Public Works Agency
Private	Southern California Water Company

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Errata

Changes made to the basin description will be noted here.