

Thousand Oaks Area Groundwater Basin

- Groundwater Basin Number: 4-19
- County: Ventura, Los Angeles
- Surface Area: 3,110 acres (4.9 square miles)

Basin Boundaries and Hydrology

This groundwater basin underlies a small valley between Lake Sherwood and Thousand Oaks in southeastern Ventura County and western Los Angeles County. The basin is bounded by semi-permeable rocks of the Santa Monica Mountains (CSWRB 1953; DWR 1959). The valley is drained by Conejo Creek and Triunfo Canyon. Average annual precipitation ranges from 16 to 20 inches.

Hydrogeologic Information

Water Bearing Formations

Groundwater is found mainly in alluvium, although it is also produced from other older rock units (VCPWA 2002). Groundwater in the basin is unconfined in the Quaternary age alluvium that fills Triunfo Canyon and underlying Conejo Creek. The Miocene age Modelo and Topanga Formations contain productive sandstone beds, and some groundwater is produced from fractures in the Modelo, Conejo, and Topanga Formations (CSWRB 1953; DWR 1959).

Restrictive Structures

Water levels indicate that a groundwater divide exists near Thousand Oaks coincident with a surface drainage divide (CSWRB 1953).

Recharge Areas

Recharge to the basin is by percolation of precipitation to the valley floor and stream flow.

Groundwater Level Trends

Hydrographs show that water levels remained fairly stable during 1979 through 1999. Seasonal change in water level ranges from about 10 to 20 feet. Groundwater moves northwest near Thousand Oaks and southward near Triunfo Canyon (CSWRB 1953).

Groundwater Storage

Groundwater Storage Capacity. The total storage capacity is estimated at 130,000 af (VCPWA 2002).

Groundwater in Storage. The basin is estimated to have been about 87 percent full in 1999 (Panaro 2000), or to have had about 113,000 af in storage.

Groundwater Budget (Type C)

No subsurface inflow is known to occur to the basin (CSWRB 1953).

Groundwater Quality

Characterization. Groundwater in the basin is magnesium-calcium-sodium sulfate in character. TDS content in the basin ranges from 1,200 to 2,300 mg/L with the average at 1,410 mg/L (VCPWA 1996).

Impairments. High alkalinity and hardness are prevalent in wells deeper than 100 feet, influencing taste and quality characteristics (VCPWA 1996). TDS is high in this basin

Well Characteristics

Well yields (gal/min)		
Municipal/Irrigation	Range:	Average: 39 gal/min (Panaro 2000)
	Total depths (ft)	
Domestic	Range:	Average:
Municipal/Irrigation	Range:	Average:

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
Ventura County Public Works Agency	Groundwater levels	2

Basin Management

Groundwater management:

Water agencies

Public	Ventura County Public Works Agency, City of Thousand Oaks Public Works Department.
Private	California Water Service Company – Westlake District, California American Water Company

References Cited

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Additional References

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- Richardson, H. E., and others. 1968. *Ventura River Project Extensions, Feasibility Study, Ground-Water Geology and Resources Appendix*. United States Bureau of Reclamation (USBR): unnumbered Report.
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Errata

Changes made to the basin description will be noted here.