Lockwood Valley Groundwater Basin

- Groundwater Basin Number: 4-17
- County: Ventura
- Surface Area: 21,800 acres (34.1 square miles)

Basin Boundaries and Hydrology

This groundwater basin underlies Lockwood Valley in northeastern Ventura County. The basin is bounded by non-water bearing tertiary deposits of the Mint Canyon and Quatal Formations (CSWRB 1953). Average annual precipitation ranges from 12 to 20 inches.

Hydrogeologic Information

Water Bearing Formations

Groundwater is found primarily in Quaternary age alluvium. Deposits of sand and silt that average about 100 feet thick form the principal water-bearing units (VCPWA 2002). Groundwater in the basin is unconfined VCPWA 2002).

Restrictive Structures

No information is available.

Recharge Areas

Recharge is principally from percolation of precipitation.

Groundwater Level Trends

Water levels appear fairly stable, with one well ranging over only about 15 feet in water table elevation during 1971 through 1999. Groundwater flows toward Lockwood Creek and then southward toward Piru Creek.

Groundwater Storage

Groundwater Storage Capacity. The total storage capacity is estimated at 49,210 af (Panaro 2000; VCPWA 2002).

Groundwater in Storage. It is estimated that the basin was close to 70 percent full (Panaro 2000; VCPWA 2002), or contained about 34,447 af in 1999.

Groundwater Budget (Type A)

Recharge to the basin is estimated to be 1,200 to 4,500 af/yr from underflow, 425 af/yr from irrigation, and about 500 af/yr from septic system return (Panaro 2000; VCPWA 2002).

Groundwater Quality

Characterization. TDS content can range from 350 to more than 1,900 mg/L with an average of 821 mg/L (VCPWA 1996). Analysis of data from one public well shows a TDS concentration of 1,300 mg/L.

Impairments. Boron and arsenic concentrations locally approach drinking water standards (VCPWA 1996). High alpha particle counts derived from radioactive uranium have been detected in water from four wells in the basin (VCPWA 1996).

Water Quality in Public Supply Wells

Constituent Group[1]	Number of wells sampled[2]	Number of wells with a concentration above an MCL[3]
Inorganics – Primary	1	0
Radiological	0	0
Nitrates	1	0
Pesticides	1	0
VOCs and SVOCs	1	0
Inorganics – Secondary	1	1

[1] A description of each member in the constituent groups and a generalized discussion of the relevance of these groups are included in *California's Groundwater – Bulletin 118* by DWR (2003).
[2] Represents distinct number of wells sampled as required under DHS Title 22 program from 1994 through 2000.
[3] Each well reported with a concentration above an MCL was confirmed with a second detection above an MCL. This information is intended as an indicator of the types of activities that cause contamination in a given basin. It represents the water quality at the sample location. It does not indicate the water quality delivered to the consumer. More detailed drinking water quality information can be obtained from the local water purveyor and its annual Consumer Confidence Report.

Well Characteristics

	Well yields (gal/min)	
Municipal/Irrigation	Range: - 350 gal/min	Average: 25 gal/min (VCPWA 1996)
	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	1

Basin Management

Groundwater management:

Water agencies

Public	Ventura County Public Works Agency
Private	

References Cited

California State Water Resources Board (CSWRB). 1953. *Ventura County Investigation.* Bulletin 12. Two Volumes.

Panaro, D. 2000. Fox Canyon Groundwater Management Agency: Written Communication to R.R. Davis (DWR), March 21, 2000.

Ventura County Public Works Agency (VCPWA). 1996. *Ventura County Groundwater Quality Assessment Report.* 57 p.

_____. 2002. "Ventura County Groundwater Basins." http://www.ventura.org/vcpwa/wre/wrd/pages/BASINS.htm (March 2002).

Additional References

California Department of Water Resources (DWR). 1959. *Water Quality and Water Quality Problems, Ventura County.* Bulletin 75. Two Volumes. 195 p.

_____. 1975. *California's ground water.* Bulletin 118. 135 p.

California Department of Public Works, (CDPW). 1933. *Ventura County Investigation.* Division of Water Resources Bulletin 46.

California State Water Resources Board (CSWRB). 1953. *Ventura County Investigation.* Bulletin 12. Two Volumes.

Errata

Changes made to the basin description will be noted here.