

Upper Santa Ana Valley Groundwater Basin, Cajon Subbasin

- Groundwater Basin Number: 8-2.05
- County: San Bernardino
- Surface Area: 23,200 acres (36.3 square miles)

Basin Boundaries and Hydrology

The Cajon Subbasin underlies Cajon Valley and Lone Pine Canyon, mostly in Cajon Pass, which is the boundary between the San Gabriel and San Bernardino Mountains. This subbasin is bound by the Upper Mojave River Valley Groundwater Basin on the north along a surface drainage divide and the Bunker Hill Subbasin of the Upper Santa Ana Valley Groundwater Basin on the south. The subbasin is bound by impermeable rocks of the San Gabriel Mountains on the west and the San Bernardino Mountains on the east. Cajon and Lone Pine Creeks drain the valley southward as tributaries to the Santa Ana River. Annual precipitation throughout the subbasin ranges from 23 inches to 33 inches.

Hydrogeologic Information

Water Bearing Formations

The chief water-bearing material in the Cajon Subbasin is alluvium. Holocene age alluvium consists of relatively unweathered sand, silt, and gravel deposited in active creek beds (DWR1970). Older Pleistocene age alluvium is found as alluvial fan deposits derived from the bordering mountains.

Restrictive Structures

The San Andreas fault zone crosses the southern part of the subbasin and cuts up Lone Pine Canyon. Springs are found along the trace of the fault zone indicating it is a barrier to groundwater. Lost Lake is a spring fed sag pond formed in older alluvium where there is a step in the fault trace.

Recharge Areas

Recharge is derived from percolation of precipitation, return irrigation water, and stream flow.

Groundwater Level Trends

No information is available.

Groundwater Storage

Groundwater Storage Capacity. No information is available.

Groundwater in Storage. No information is available.

Groundwater Budget (Type C)

No information is available.

Groundwater Quality

Characterization. Water sampled from 2 public supply wells has an average TDS content of approximately 127 mg/L with a range of 99 to 155 mg/L.

Impairments. No information is available.

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	2	0
Radiological	2	0
Nitrates	2	0
Pesticides	2	0
VOCs and SVOCs	2	0
Inorganics – Secondary	2	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: 8 – 200 gal/min	Average: 60 gal/min (5 Well Completion Reports)
Total depths (ft)		
Domestic	Range: 56 - 816 ft	Average: 365 ft (60 Well Completion Reports)
Municipal/Irrigation	Range: 120 – 500 ft	Average: 121 ft (8 Well Completion Reports)

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
Department of Health Services and cooperators	Groundwater levels	5
	Miscellaneous water quality	
	Title 22 water quality	

Basin Management

Groundwater management:

Water agencies

Public

Private

References Cited

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Additional References

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Errata

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