

Morro Valley Groundwater Basin

- Groundwater Basin Number: 3-41
- County: San Luis Obispo
- Surface Area: 1,200 acres (1.9 square miles)

Basin Boundaries and Hydrology

The Morro Valley Groundwater Basin underlies Morro Valley in west-central San Luis Obispo County. The basin is bounded on the west by the Pacific Ocean and on all other sides by contact with impermeable rocks of the Jurassic to Cretaceous age Franciscan Group. The valley is drained by Morro Creek to the Pacific Ocean. Precipitation ranges from 15 to 17 inches per year.

Hydrogeologic Information

Water Bearing Formations

Groundwater is found in alluvium, dune sand, and terrace deposits. Well logs indicate a thickness of sedimentary rocks of about 60. Groundwater is unconfined (DWR 1975), with a specific yield estimated at 12 percent (DWR 1958).

Alluvium. Holocene and Pleistocene age alluvium, which is the main source of ground water, consists of clays, silts, sands, and gravels.

Dune sand. Dune sand consists of very fine- to medium-grained sands with thin interbeds of clay, silt, and gravel (DWR 1972).

Terrace deposits. Terrace deposits consist of unconsolidated sand, gravel, and clay of fluvial and marine origin with a thickness up to 60 feet (DWR 1975).

Recharge Areas

Recharge to the basin is by percolation of stream flow, precipitation, and excess irrigation flow (DWR 1958).

Groundwater Level Trends

Groundwater moves westward through the basin (DWR 1958).

Groundwater Storage

Groundwater Storage Capacity. The total storage capacity has been estimated at 7,600 af (DWR 1975) and 33,900 af (DWR 1982).

Groundwater in Storage. Unknown.

Groundwater Budget (Type C)

No information is available.

Groundwater Quality

Characterization. Groundwater analyses from 28 wells in this basin taken from 1957 through 1992 show TDS content ranging from 288 to 5,100 mg/L. Analyses of 4 public supply wells show an average TDS content of 1,150 mg/L in the basin, with a range of 900 to 1,700 mg/L.

Impairments. Water from two wells near the coast sampled in 1970 had a chloride content of about 690 mg/L and 900 mg/L (DWR 1975).

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	4	1
Radiological	4	0
Nitrates	4	0
Pesticides	4	0
VOCs and VSOCs	4	0
Inorganics – Secondary	4	2

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 Production characteristics

	Well yields (gal/min)	
Municipal/Irrigation	Range: to 442 gal/min	Average: 300 gal/min (DWR 1958)
	Total depths (ft)	
Domestic	Range:	Average:
Municipal/Irrigation	Range: to 90 ft	Average: 80 ft (DWR 1958)

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	6

Basin Management

Groundwater management:

Water agencies

Public

San Luis Obispo County -
Department of Public Works

Private

References Cited

- California Department of Water Resources (DWR). 1958. *San Luis Obispo County Investigation*. Bulletin 18. 288 p.
- _____. 1972. *Sea Water Intrusion: Morro Bay Area, San Luis Obispo County*. Bulletin 63-6.
- _____. 1975. *Sea-Water Intrusion in California: Inventory of Coastal Ground Water Basins*. Bulletin 63-5.
- _____. Southern District. 1982. *Morro Bay Area Water Management Plan*. Quoted in DWR (1986). *San Luis Obispo County Master Water Plan Update*.

Additional References

- California Department of Water Resources (DWR), Southern District. 1986. *San Luis Obispo County Investigation Master Water Plan Update*. 107 p.

Errata

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