

Cottoneva Creek Valley Groundwater Basin

- Groundwater Basin Number: 1-37
- County: Mendocino
- Surface Area: 760 acres (approx. 1 square mile)

Basin Boundaries and Hydrology

Cottoneva Creek Valley is an elongate, west and north trending coastal drainage basin situated within the Coast Ranges of northwestern Mendocino County and located near the coastal town of Rockport. This valley is about 4 miles in length and has a width ranging from about 0.1 to 0.3 miles. The Cottoneva Creek Valley Groundwater Basin is defined by the areal extent of Quaternary Alluvium, which is bounded on all sides by bedrock of the Franciscan Formation.

Cottoneva Creek Valley is drained to the south and west by Cottoneva Creek and its tributaries and to the west by Rockport Creek before entering the Pacific Ocean at Rockport Bay. Precipitation in this basin ranges from approximately 47 inches near the rivermouth to 63 inches on the northeast edge of the basin.

Hydrogeologic Information

Water-Bearing Formations

Significant water-bearing formations that occur in Cottoneva Creek Valley include only Quaternary Alluvium. Bedrock of the Franciscan Complex surrounds and underlies the area but due to its consolidated nature, it is essentially non-water bearing except for areas with significant fracture porosity. Information on water-bearing formations and groundwater occurrence was taken from DWR (1958).

Alluvium and River Channel Deposits. These deposits are Holocene in age and consist largely of unconsolidated silts, gravels, clays, and sands. These deposits are exposed in the active river channel and floodplain of Cottoneva and Rockport Creek. Limited data suggests the alluvium in the smaller valleys in Mendocino County averages 10 to 15 feet thick. The maximum thickness of these deposits is unknown. No published well yield data was identified for wells in this area; however, wells drilled in the small alluvial valleys in Mendocino County have proven unproductive because of low permeability. Groundwater in the alluvial deposits is typically unconfined but may be semi-confined locally. No published specific yield data for alluvium in this area are available.

Groundwater Level Trends

No groundwater level data for wells in Cottoneva Creek Valley are available and therefore, groundwater levels trends could not be determined.

Groundwater Storage

Groundwater Storage Capacity. No data available.

Groundwater in Storage. No data available.

Groundwater Budget (Type C)

No data available.

Groundwater Quality

Characterization. No recently published groundwater quality data is available for wells in Cottoneva Creek Valley; however, limited groundwater quality data collected in 1953 from a spring located in the southern portion of the valley indicates a sodium-calcium bicarbonate water type with a TDS of 118 ppm (DWR 1958).

Impairments. No data available; however, since this basin is along and in contact with the Pacific Ocean, seawater intrusion could reasonably be expected to be a problem.

Well Characteristics

Well yields (gal/min)	
Municipal/Irrigation	No known data
Total depths (ft)	
Domestic	Range: 104 Average: 104 (1 well completion report)
Municipal/Irrigation	No known data

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
DWR (incl. Cooperators)	Groundwater levels	None known
DWR (incl. Cooperators)	Mineral, nutrient, & minor element.	None known
Department of Health Services	Title 22	None

Basin Management

Groundwater management:	No groundwater management plans were identified.
Water agencies	
Public	Mendocino County Water Agency.
Private	

Selected Bibliography

California Department of Water Resources (DWR) 1958. Recommended Water Well Construction and Sealing Standards, Mendocino County. Bulletin No. 62 – November.

Errata

Changes made to the basin description will be noted here.