

Joseph Creek Groundwater Basin

- Groundwater Basin Number: 5-86
- County: Modoc
- Surface Area: 4,450 acres (7 square miles)

Basin Boundary and Hydrology

The Joseph Creek Groundwater Basin is located south of Goose Lake Groundwater Basin and west of the Warner Mountains. The basin consists of Quaternary Pleistocene non-marine deposits and Holocene alluvial deposits. The alluvial deposits are located at the southern and western boundaries of the basin along North Fork Pit River and Parker Creek. Alluvial deposits are also located centrally and at the far eastern extents of the basin. The basin is bounded by Tertiary volcanic rocks of the Warner Mountains to the north, east, and south and Pleistocene pyroclastic rocks and basalt to the south and west respectively (Gay 1958). Annual precipitation ranges from 15- to 19-inches, increasing to the east.

Hydrogeologic Information

Hydrogeologic information was not available for the following:

Water-Bearing Formations

Groundwater Level Trends

Groundwater Storage

Groundwater Budget (Type B)

The estimate of groundwater extraction is based on a 1997 survey conducted by the California Department of Water Resources. The survey included land use and sources of water. Groundwater extraction for agricultural use is estimated to be 1,300 acre-feet. Deep percolation of applied water is estimated to be 140 acre-feet.

Groundwater Quality

Well Characteristics

Well yields (gal/min)	
Municipal/Irrigation	400 (1 well completion report)
Total depths (ft)	
Domestic	
Municipal/Irrigation	230 (1 well completion report)

Active Monitoring Data

Agency	Parameter	Number of wells / measurement frequency
	Groundwater levels	NKD
	Miscellaneous water quality	NKD
NKD – No Known Data		

Basin Management

Groundwater management: Modoc County adopted a groundwater management ordinance in 2000.

Water agencies

Public None

Private None

Selected References

- California Department of Water Resources. 1963. Northeastern Counties Groundwater Investigation, Volume 1 and Volume 2. California Department of Water Resources. Bulletin 98.
- California Department of Water Resources. 1960. Northeastern Counties Investigation. California Department of Water Resources. Bulletin 58.
- California Department of Water Resources. 1964. Shasta County Investigation. California Department of Water Resources. Bulletin 22.
- California Department of Water Resources. 1965. Northeastern Counties Ground Water Investigation, Appendix C, Geology. California Department of Water Resources, Northern District. Bulletin 98.
- California Department of Conservation, Division of Mines and Geology. 1966. Geology of Northern California Bulletin 190.
- California Department of Water Resources. 1968. Water Well Standards-Shasta County, California. California Department of Water Resources. Bulletin 74-8.
- California Department of Water Resources. 1982. Northeastern Counties Ground Water Update. California Department of Water Resources, Northern District. Office Report.
- California Department of Water Resources. 1984. Eastern Shasta County Ground Water Study, California Department of Water Resources, Northern District.
- Gay TE, Jr., Aune QA. 1958. Geologic Map of California, [Alturas Sheet]. California Division of Mines and Geology. Atlas.

Bibliography

- California Department of Water Resources. 1975. California's Ground Water. California Department of Water Resources. Bulletin 118.
- California Department of Water Resources. 1980. Ground Water Basins in California. California Department of Water Resources. Bulletin 118-80.
- Dickinson WR, Ingersoll RV, Graham SA. 1979. Paleogene Sediment Dispersal and Paleotectonics in Northern California. Geological Society of America Bulletin 90:1458-1528.

Errata

Changes made to the basin description will be noted here.