

Hayfork Valley Groundwater Basin

- Groundwater Basin Number: 1-6
- County: Trinity
- Surface Area: 3,300 acres (5 square miles)

Basin Boundaries and Hydrology

The Hayfork Valley Groundwater Basin is an irregularly shaped basin with the main valley trending east-west along Hayfork Creek. The alluvial valleys of Salt Creek and Big Creek are also part of the basin. The community of Hayfork is located within the central portion of the basin. The basin is bounded by Oligocene non-marine sedimentary rocks and, to a small extent, Pre-Cretaceous metamorphic rocks (Strand 1962). The Chancelulla Formation and granitic intrusives constitute bedrock in the valley. The valley measures 6 miles long and 3.5 miles wide. Annual precipitation ranges from 35- to 37-inches.

Hydrogeologic Information

Water-Bearing Formations

The primary water-bearing formation in the basin is Quaternary alluvium.

Holocene Alluvium. Holocene alluvium makes up part of the valley floor extending from both sides of Hayfork Creek and for a short distance up its main tributaries. The alluvium consists of moderately permeable sand, gravel, silt, and clay. Thickness of the alluvium may extend up to 30 feet. The average thickness is about 10 feet. (DWR 1965)

Groundwater Level Trends

Depth to water varies from 10 feet below ground surface near streams to 35 feet below ground surface near the valley margins (DWR 1965). Published information regarding groundwater level trends was not found.

Groundwater Storage

Groundwater Storage Capacity. The storage capacity for the basin is estimated to be 1,500 acre-feet based on a saturated thickness of 10 feet, a surface area of 1,000 acres, and a specific yield of 15 percent (DWR 1965).

Groundwater Budget (Type B)

The estimate of groundwater extraction for the Hayfork Valley Basin is based on a 1996 survey conducted by the Department of Water Resources. The survey included landuse and sources of water. Groundwater extraction for agricultural use is estimated to be 960 acre-feet. Deep percolation of applied water is estimated to be 220 acre-feet.

Groundwater Quality.

Calcium-magnesium bicarbonate is the predominant water type in the basin (DWR 1965).

Well Characteristics

Well yields (gal/min)

The maximum well yield is estimated to be 200 gpm (DWR 1975).

Total depths (ft)

Domestic	Range: 24 - 304	Average: 141 (60 Well Completion Reports)
Municipal/Irrigation		

Active Monitoring Data

Agency	Parameter	Number of wells / measurement frequency
	Groundwater levels	NKD
DWR	Miscellaneous water quality	5 wells biennially

NKD – No known data

Basin Management

Groundwater management: No known groundwater management plans, groundwater ordinances, or basin adjudications.

Water agencies

Public Trinity County WW District # 1

Private

Selected References

California Department of Water Resources. 1975. California's Ground Water. California Department of Water Resources. Bulletin 118.

California Department of Water Resources. 1965. Water Resources and Future Requirements. North Coastal Hydrographic Area. Volume 1: Southern Portion. Bulletin 142-1.

Strand RG. 1962. Geologic Map of California, [Redding Sheet]. Scale 1:250,000. California Division of Mines and Geology.

Bibliography

Bailey EH. 1966. Geology of Northern California. California Division of Mines and Geology. Bulletin 190.

California Department of Water Resources. 1960. Northeastern Counties Investigation. Bulletin 58.

- 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.
- Fratlicelli LA, Albers JP, Irwin WP, Blake MC. 1987. Geologic Map of the Redding 1 x 2 Degree Quadrangle, Shasta, Tehama, Humboldt, and Trinity Counties, California. USGS. OF-87-257.
- Irwin WP. 1960. Geologic Reconnaissance of the Northern Coast Ranges and Klamath Mountains, California. California Division of Mines and Geology. Bulletin 179.
- Planert M, Williams JS. 1995. Ground Water Atlas of the United States, Segment 1, California, Nevada. USGS. HA-730-B.

Errata

Changes made to the basin description will be noted here.