

The Circle S Ranch has six water rights:

Statement Number	Name of Diversion or Spring	Year First Used	Riparian	Pre-1914	Rate	Units
S012890	Mill Creek	1857	Yes	Yes	20.0 (Net 5.0)	cubic feet per second
S012889	Canyon Creek	1890 - 1927	Yes	Yes	2.0	cubic feet per second
S012892	Swimming Pool Spring	1890 - 1927	Yes	Yes	5.7	gallons per minute
S012891	Seward House Spring	1910-1958	Yes		10.0	gallons per minute
S012752	Three Fork Spring	1890	Yes	Yes	500.0	gallons per minute
S012753	Y Spring	1927	Yes		20.0	gallons per minute

The Circle S Ranch is about 6 miles northeast of Mineral, California, in Tehama County. The ranch is in the very narrow valley containing Mill Creek and tributaries, and is about 4-1/4 miles long. The width varies from one quarter mile at the top, to three quarters of a mile near the bottom. The ranch crosses Sections 34 and 35, in Township 30 North, Range 4 East; and Sections 2, 3, 10, 11, 14, and 23 in Township 29 North, Range 4 East, Mount Diablo Base & Meridian

Mill Creek water has been used on the ranch since 1857, and other water has been diverted since that time. There are two diversions and four springs. The place of use for diverted water includes some U.S. Forest Service property with cattle grazing:

Place of use, Mill Creek:

- NE 1/4 SE 1/4 Section 10, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SE 1/4 SE 1/4 Section 10, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- NW 1/4 SW 1/4 Section 11, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SW 1/4 SW 1/4 Section 11, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- NW 1/4 NW 1/4 Section 14, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SE 1/4 SW 1/4 Section 14, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- NE 1/4 NW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SW 1/4 NW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SE 1/4 NW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian

Place of use, Canyon Creek:

- SW 1/4 Section 11, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- NE 1/4 NW 1/4 Section 14, Township 29 North, Range 4 East, Mount Diablo Base & Meridian

Place of use, Swimming Pool Spring:

- SW 1/4 SW 1/4 Section 11, Township 29 North, Range 4 East, Mount Diablo Base & Meridian

Place of use, Seward House Spring:

- SW 1/4 SW 1/4 Section 11, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- NW 1/4 NW 1/4 Section 14, Township 29 North, Range 4 East, Mount Diablo Base & Meridian

Place of use, 3 Forks Spring:

- NW 1/4 NW 1/4 Section 14, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SE 1/4 SW 1/4 Section 14, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- NE 1/4 NW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SW 1/4 NW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SE 1/4 NW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian

Place of use, Y Spring:

- SW 1/4 NW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian
- SE 1/4 NW 1/4 Section 23, Township 29 North, Range 4 East, Mount Diablo Base & Meridian

Beneficial uses are as follows:

Statement Number	Name of Diversion or Spring	Land Irrigated (acres)	Number of Cattle	Houses	Domestic	Fire Protection & Sprinklers	Wildlife / Waterfowl	Recreation
S012890	Mill Creek	250	150				Waterfowl	
S012889	Canyon Creek	100	50					
S012892	Swimming Pool Spring		50					Yes
S012891	Seward House Spring	5			4			
S012752	Three Fork Spring	10	15	3	10	Yes		
S012753	Y Spring	5	2	3	6	Yes		
Totals:		370	267	6	20			

Measurement of diversions on the ranch would be difficult because of high sediment loads from Mill Creek. Any data logger at either the Mill Creek or Canyon Creek diversions would be clogged with sediment in a few days to a week during the Spring, and every week or so in the Summer.

Net diversions are at most 10% of Mill Creek and 25% of Canyon Creek in the late Summer or Fall. All of the water diverted on the ranch infiltrates, percolates, or flows directly back into Mill Creek. No flows are exported to other drainages. The soils are very gravelly, rest on top of lava flows, and infiltration and percolation are very high.

Mill Creek is dynamic, and the stream and banks move every winter, shifting dramatically in wet years. Many variables affect the creek and its rate of flow, including snowfall, snow pack, snow water content, seasonal weather patterns, rainfall, infiltration, and riparian growth.

The ranch is opened in May, and the California Department of Fish & Wildlife installs the fish screen as early as possible, between 6/1 and 6/15. Natural flooding from the creek, as well as rainfall irrigates the ranch before diversion begins. Diversion begins when Mill Creek flows are low enough, considering the high variation in flows each day. Once diversions begin, flows still vary greatly throughout the day.

The use of the average of 20 cubic feet per second (cfs) suffices for the diversion amount. An average of 5 cfs returns to Mill Creek at the fish screen. Fish flows are therefore separate from irrigation flows. The net delivery to pasture is about 5 cfs because of high infiltration in the gravelly soils, in the ditch and on irrigated lands.

Canyon Creek is a highly dynamic water source that fluctuates greatly in the Spring between morning and afternoon. Peak flows may occur on any date between 6/1 - 7/15, depending on snowfall, snow pack, snow water content, seasonal weather patterns, rainfall, infiltration, and riparian growth. Flows have been estimated using velocity through a set depth and width, and the average diversion is about 2 cubic feet per second.

Springs intermingle with drainages through June, and when it rains in the Summer, causing extreme changes in flow.

Consumptive use and stock water use numbers are a better indicator of the use of water on the ranch. The total acreage of irrigated pasture is 370 acres. About 270 cattle are pastured on the ranch each year. Using a value of 3 acre-feet per acre, which may be high because of the short season on the ranch, the total consumptive use of water by pasture is about 1,100 acre-feet. The cattle use about 3 acre-feet. Domestic use is a small part of overall spring flows, since most of the water runs directly back into Mill Creek; total consumptive domestic use may be 15 acre-feet per year, not counting the small acreage of pasture irrigated from springs.