



BEAR VALLEY COMMUNITY SERVICES DISTRICT

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YOUR BEAR VALLEY WATER SYSTEM

How does water get to my home?

Bear Valley has a very complex water system. Water is drawn from 3800 feet at the lowest point of the system which is out in Cummings Valley and distributed throughout Bear Valley Springs, all the way up to at the top of Paramount; the highest point of the water system at 6400 feet. To accomplish this requires 36 booster stations, 43 storage tanks, 7 pneumatic tanks in conjunction with 26 wells to feed those booster stations and tanks. This system is needed to serve the 19 different pressure zones in Bear Valley Springs. Each lot in Bear Valley Springs has water service, being supplied by water mains that run under the 110 miles of District roads. There are 3602 service connections, which equates to 148,000 lineal feet of service line running from the mains to residential meters.

The CSD's water system is capable of holding just over 5 million gallons of water in its 43 storage tanks, with capacities ranging from 750,000 gallons in the largest to 10,000 gallons in the smallest. On average, Bear Valley's community water system must produce 1,200 gallons per minute to satisfy all consumption needs. The system's water is required to be tested and sampled for contaminants on a weekly, monthly, quarterly, and an annual schedule, totaling over 500 samples a year.

Our water starts its long journey beginning in Cummings Valley where we have 5 wells. The wells pump directly into the large Cummings Valley tank where it waits for its next call. When this call is executed, which is determined by tank levels within the valley, the booster pumps send water up and over Big Sky Ct. and begin filling our lower valley tanks simultaneously. Our wells inside of Bear Valley also contribute to filling these tanks. Once these tanks are what we call "fat and happy", they flood all the lower valley pipelines via gravity, keeping the valley floor full of water.

The next journey for our water is to head up the mountains. Every upper road within Bear Valley has a series of pump stations and tank stations in line with each other. Basically, a pump pushes the water to the next tank in line, and that tank gravity feeds the pipelines below it. This is done to keep adequate water pressure at houses and also reduces the size of pumps needed to get the water all the way to the top. Pneumatic tank stations pick up any houses that are above the tanks. These elevation changes result in 19 different pressure zones. Normal system pressure can range anywhere from 40 psi all the way to 250 psi and higher, which require 21 individual pressure reducing stations. All along the way, 171 air-vacs work to prevent air build up in the lines.

This complex system was constructed from 1971 – 1974. Your water staff responded to 109 water breaks in 2018, 71 of which were service line repairs.