

THIS IS THE TWAIN HARTE VALLEY MUTUAL WATER COMPANY

This is our water company. We each own an equal share and we each share an equal responsibility. We should each expend some effort to keep it operating at a reasonable cost.

Our system consists of a holding tank, a chlorinating system, a filtering system, a pumping system, and three storage tanks.

We draw our raw water from the Tuolumne County Ditch System. The source of water for the ditch system is the South Fork of the Stanislaus River which originates in the Emigrant Wilderness Area of the Stanislaus National Forest. Before its water is diverted into the ditch system, the South Fork passes through such recreation areas as Waterhouse Lake (six miles northeast of Pinecrest), Pinecrest Reservoir (formerly Strawberry Lake), Frasier Flat (seven miles upstream from Lyons Reservoir, and Lyons Reservoir itself.

The Tuolumne County Ditch System begins at Lyons Reservoir which is owned and operated by the P. G. & E. The ditch system, the source of more than 50% of the county's domestic water supply, was started in the gold rush days of the 1850's to supply a steady source of water for the mining industry. At one time it consisted of some 270 miles of ditches.

In 1927, P.G.&E purchased what remained of the system from the Tuolumne Water and Electric Power Company and some smaller power companies that had developed along the system when hydraulic gold mining declined.

In 1984 Tuolumne County took over ownership of all but the main

ditch from the P. G. & E. The present system consists of about 80 miles of ditches, flumes, and culverts. There are about 30 community water companies and some 800 individuals who draw from the system.

The first branch off the main ditch is the Section IV ditch which begins in Twain Harte Valley at South Fork Road near Sierra Pine Ave., and runs through Twain Harte Valley and Twain Harte. We draw our water about 600 feet from the beginning of the Section IV ditch. Therefore, we are the first users of the county's ditch system, and because of this, our raw water is the least contaminated of the entire system.

Raw water from the ditch enters our 5000 gallon redwood holding tank which is located in back of the pumphouse on Sierra Pine Ave. The county controls the inlet valve from the ditch, the six inch pipe to the tank, and the entrance weir inside the tank. We are allowed a maximum of eight miners inches (129,600 gallons) a day. If our requirements should exceed eight miners inches, the county would charge us a one time charge of \$12,000 for each additional miners inch. Our current usage ranges from 35,000 gallons on a winter weekday to 115,000 gallons on a summer holiday. Our highest usage is on summer weekends. Therefore, it behooves permanent residents to water their gardens during the week.

Chlorine is added to the raw water in the holding tank by a metering pump. Water in the distribution system is checked daily for chlorine content and the metering pump is adjusted as necessary. A bacteriological examination is performed monthly by an independent company. A copy of their report goes to the county health department. To date, our water has always met State Standards for safe drinking water.

The chlorinated water is pumped through two filters to the storage tanks. These filters are filled with coarse gravel, fine gravel, sand, and anthracite. Each filter has a filtering capacity of 80 million gallons per minute.

The pump system consists of two 9000 gallon per hour pumps. Only one pump can be run at a time, and we rotate pumps each time the filters are backflushed (usually twice a week). Operation of the pump in use is controlled by coordinated level switches in one of the storage tanks (activated by need) and in the redwood holding tank (activated by availability).

The storage tank system consists of three steel storage tanks. The largest (installed in 1965) is 30 feet in diameter and 24 feet high. It has a capacity of 126,000 gallons, and contains the float level marker and the float level contact switch that partially controls the pump system. The other two tanks (installed in 1981 and 1985) are both 12 feet in diameter and 24 feet high. Each has a capacity of 22,000 gallons.

Since the foundations of all three tanks are at the same elevation (4044 feet), and all three tanks are interconnected by open pipes, the one float level marker in the large tank indicates the water level in all three tanks.

A well that can produce about 1,500 gallons per hour is available to us when the ditch is shut down for repair or maintenance. This well pumps water directly into the holding tank. The well water is then treated in the same manner as is the water from the ditch.

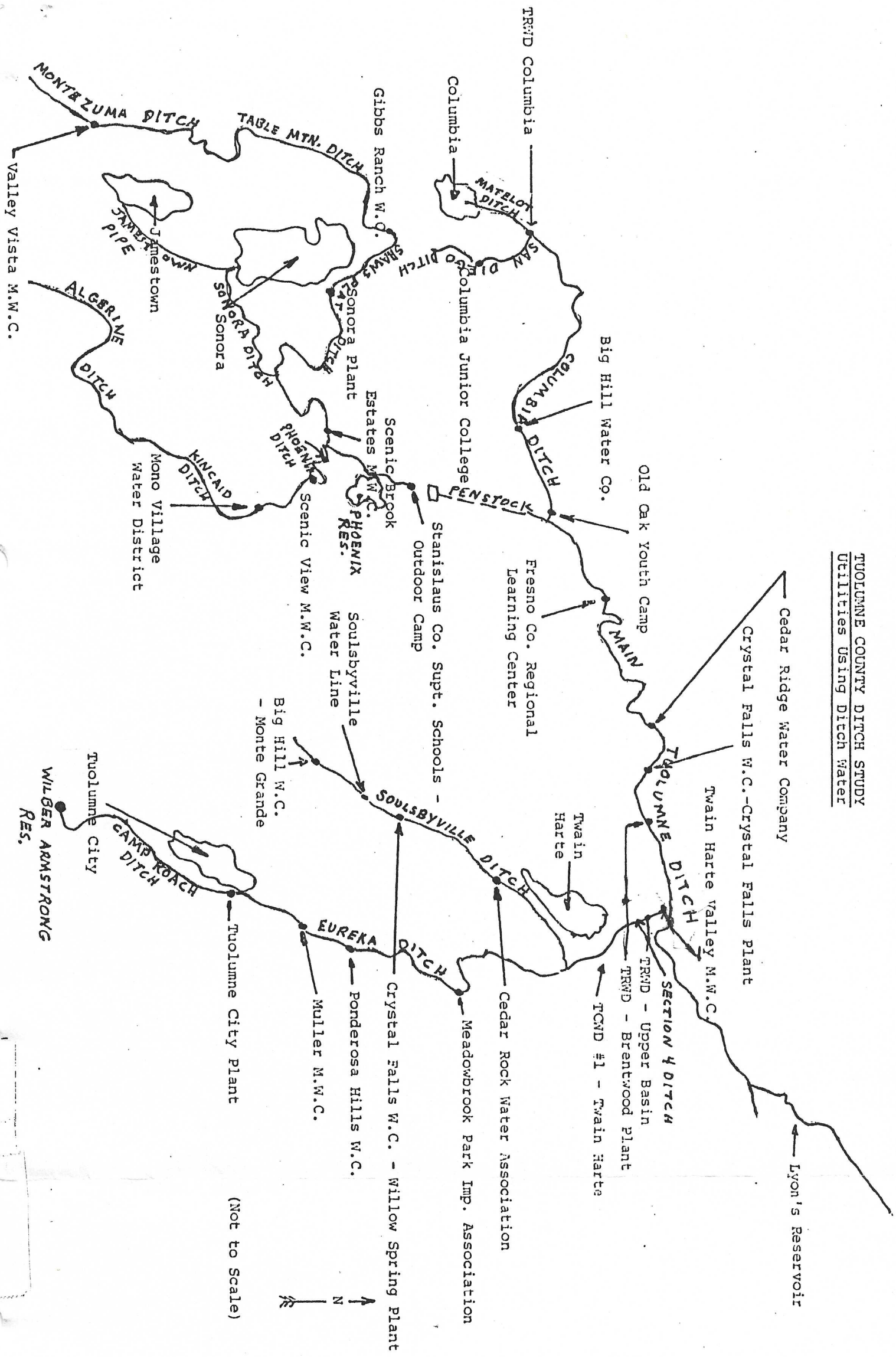
Our distributed water has some turbidity after heavy winter rains. A system to properly correct this would require the installation of a new tank, an agitating system, and an automatic metering system. The cost would be prohibitive. We do have the materials to set up a low cost, imperfect system, and are consulting knowledgeable people to determine if the result would be worth the effort.

As stated in the beginning of this article, this water company belongs to all of us, and it is hoped that you as individuals will take a more active part in helping us to keep, and maintain the integrity of the Twain Harte Valley Mutual Water Company. This individual interest is manifested by your active participation in running for Board of Director Members, attending yearly meetings, and offering your constructive input to make this a better and more efficient company.

This report prepared by

Ed Brusstar

TUOLUMNE COUNTY DITCH STUDY
Utilities Using Ditch Water



(Not to Scale)

