

## **The Ditch System**

The topography of Tuolumne County varies greatly from gently rolling terrain at the lower elevations, to steep hilly uplands deeply traversed by streams and tributaries that drain south to the Tuolumne River or north to the Stanislaus River. The majority of TUD customers reside in or near the community of Sonora which is at about elevation 2,000 feet. TUD also serves customers in several communities to the east up to about elevation 6,000 feet in the Sierras and west of Jamestown at an elevation of less than 1,500 feet. The water system has changed from a utility serving mainly gold rush mining operations to one that serves the 21st century vibrant and diverse residential, commercial and industrial sectors of Tuolumne County.

A key component of the Tuolumne Utilities District's (TUD) water supply infrastructure is the ditch system. The original ditch system was conceived and constructed by a group of energetic and resourceful miners in the early 1850's to deliver water to the communities and miners in Sonora, Jamestown and Columbia.



TUD's ditch system consists of 71 miles of open channels, flumes and pipes that begins at the Section 4 ditch near Twain Harte. This system has many uses before it reaches the District's 15 water treatment plants. The District serves approximately 600 raw or untreated water accounts along the Ditch system within the District's service area, including an unmetered raw water service to the Twain Harte Community Services District (THCSD). THCSD serves roughly 1,500 treated water connections. The ditch system delivers approximately 130 million cubic feet of raw water annually.

The ditch system is essential and helps TUD to provide the community with reliable, high quality water. Without water coming from the ditches, the only water available is what remains in the storage tanks and wells, hardly enough for drinking, sanitary use and fire protection for an extended period. Due to its importance, improvements to the ditch system are ongoing each year.