

The historic 1854 North Fork Ditch

Visible along the Shoreline Equestrian Trail between Sterling Pointe and Beeks Bight, Placer County

by Robert H. Sydnor, M-LBHA, M-AERC
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Members of the Loomis Basin Horsemen's Association frequently ride along the shoreline equestrian trail between Sterling Pointe Staging Area and Beeks Bight in southern Placer County.

Parallel to the Pioneer Express Trail is a second equestrian trail that is above the high-water mark of Folsom Lake. South of Long Bar (where the two trails merge), there are segments of the shoreline horse trail along the alignment of the 1854 historic North Fork Ditch. Yet there are no trail signs and no historical monuments to explain this ditch that was constructed prior to the Civil War. The purpose of this brief article is to summarize the construction of the ditch and provide some historical details.



Stone viaduct along the North Fork Ditch.



Water ditch at left, with horse trail on the outside berm.

The historic North Fork Ditch was constructed in 15 months with difficult manual labor (pick & shovel and wheelbarrow) from September 1854 to January 1856. The American River Water and Mining Company paid about \$180,000 to construct the 33 mile ditch within hard granitic and metamorphic rock. Recall that in 1854 there were *no* electrical pumps and *no* aqueduct pipes, so gravity-fed flowing water in ditches and wooden flumes was the only method to transport water over long distances. An intake dam diverted flowing river water from Tamaroo Bar (near Poverty Bar) and delivered it to placer mines at Rattlesnake Bar and Mississippi Bar in Orangevale. The North Fork Ditch had side-outlets with short wooden flumes whereby water could be dropped under hydraulic head towards the river. The flowing water under high velocity could be then used for sluice boxes for placer gold mining, and monitors (like a fire nozzle) could deliver intense streams of water to wash away gravel into nearby sluices. Secondary purposes for the ditch water included irrigation for fruit orchards (such as Avery's Pond and fruit ranch), and for drinking water for the miners.

The North Fork Ditch was designed to be a trapezoid five feet wide at the base, eight feet wide at the top, with a depth of about 3 feet. It was designed to carry about 3,000 "miner's inches" of water (=ancient volumetric terminology) at a steady low velocity. For about 68 years the ditch was unlined gravel and rocks which significantly leaked and was subject to winter erosion. There were a number of isolated cabins (now gone) where full-time "ditch monitors" lived and performed daily maintenance with shovels along the 33 miles. About 1925, the ditch was partly lined with cement to decrease leakage.

Floods were a constant problem at the intake-dam near Tamaroo Bar and Poverty Bar. Major floods in the American River channel of 1855, 1856, 1862, 1864 repeatedly washed away the intake-dam or severely damaged it. It was repeatedly rebuilt, relocated, or repaired because the flowing water was so valuable to the miners. Finally in 1898, masonry upgrades were made to the wooden timber intake-dam near Poverty Bar. This intake structure, renamed Birdsall Dam, was 283 feet wide and stood 16 feet above the thalweg (=the main channel) of the American River.

The North Fork Ditch was owned by a number of businessmen and mining companies in the first century of its life, including: George Reamer, Fred Birdsall, and Crawford Clarke. Finally it was sold in 1909 to the American Canon Water Company. Everything changed with the construction of Folsom Dam and the filling of Folsom Lake. The privately-held North Fork Ditch was eventually sold to the San Juan Water District, a public

utility for its valuable historic water rights (3,000 miner's inches) to the American River. A new intake was constructed south of Beal's Point, with modern water-treatment facilities, so there was no further need for a ditch. Just south of Beeks Bight, the gradient of the ditch went below the high-water mark for Folsom Lake, so the remnants of the ditch across the (future) beach were bulldozed for public safety and esthetic reasons. Ranch homes, barns, and orchards in the bottom of the river were also removed just prior to filling of Folsom Lake.

Equestrians are privileged to be able to view the middle-third of the historic 1854 North Fork Ditch, which is the only remnant of the 33-mile ditch that is still visible.



Ditch was lined with cement about 1925.



Ditch is silted-in and now forms the trail bed.

For further reading of the complete history of the North Fork Ditch with many excellent photographs, please refer to: Gary Pitzer, 2004, *150 years of water --- the history of the San Juan Water District*: The Water Education Foundation, 88 pages.