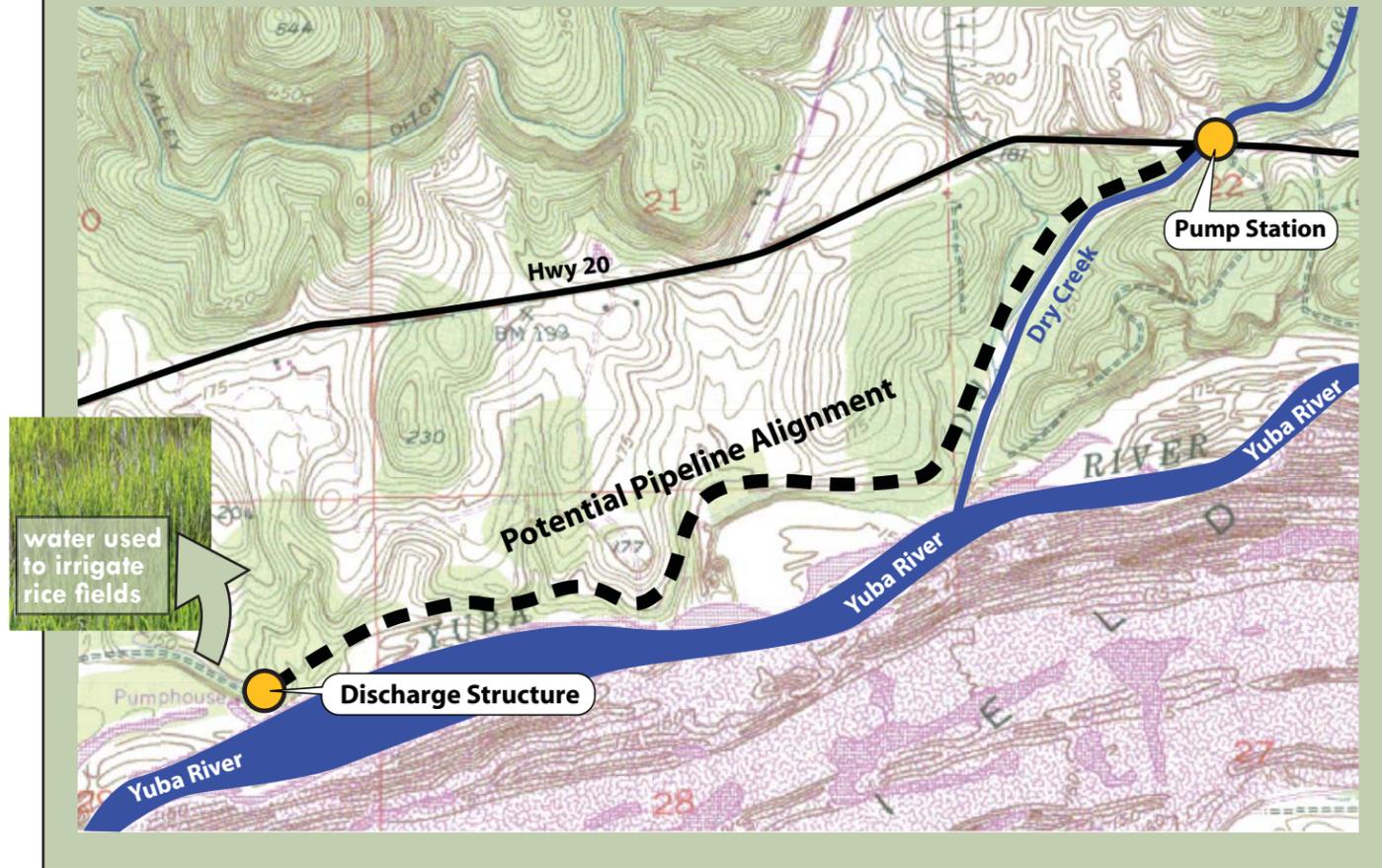


Proposed Pipeline Alignment
for Agricultural Return Flow Recapturing Project



Browns Valley Irrigation District

Agricultural Return Flow Recapturing Project



For more information
about Browns Valley Irrigation District and the
Agricultural Return Flow Recapturing Project,

please contact
Mr. Walter Cotter, General Manager,
Browns Valley Irrigation District,
at (530) 743-5703 or walter@bvid.org.

<http://www.bvid.org/>



Dry Creek at Hwy 20, Future Pump Station Location



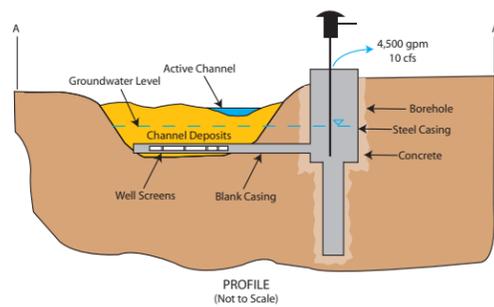
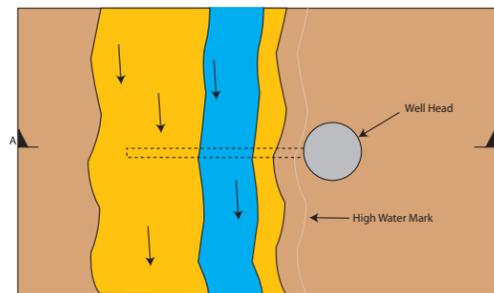
About BVID

The Browns Valley Irrigation District (BVID, District) is located in Yuba County, approximately 12 miles northeast of Marysville. The District was formed in 1888, holds senior riparian rights to the Yuba River,

and has appropriative rights to divert and store Dry Creek flows at Collins Lake. BVID's service area covers approximately 50,000 acres. The District's irrigation return water flows into Little Dry Creek and Dry Creek. Little Dry Creek is an ephemeral tributary of Dry Creek that serves as a drain for much of the District's tailwater (water that reaches the lower end of fields).

About the Project

BVID is planning to construct a pumping plant and a pipeline to capture and recycle irrigation return flows that the District water users are discharging into Little Dry Creek and Dry Creek. The District will recycle this tailwater and convey it by a pumping plant on Dry Creek to a canal that provides water to rice fields now irrigated exclusively by riparian diversions from the Yuba River.



Infiltration Gallery Schematic

The infiltration gallery will collect tailwater along Dry Creek and direct it to the pumping plant for delivery to the Pump Line Canal for use in irrigation of rice fields.

The irrigation return flows are about five degrees warmer than Dry Creek. The influx of tailwater raises the Dry Creek water temperature and introduces sediment, nutrients, and other pollutants to the creek before it reaches the Yuba River. Application of Dry Creek water to these lands within BVID will reduce the District's demand for water diverted directly from the Yuba River, thus balancing the reduction in inflow to the river that results from pumping from Dry Creek with an equivalent reduction in diversion.

The inlet to the tailwater recovery pipeline will be located along Dry Creek near the Highway 20 Bridge. An infiltration gallery will be built to collect water and direct it to the pumping plant. The infiltration gallery will eliminate any impact of the diversion on biological resources of the creek.

A pumping plant is required to lift the water from the Dry Creek infiltration gallery over the high point in the pipeline alignment and deliver it to the head of the Pump Line Canal.

Project Benefits

The Irrigation Return Flow Recapturing Project can improve water quality in the Yuba and Sacramento Rivers by pumping water from Dry Creek at times when Dry Creek flows are primarily composed of tailwater from irrigated lands. The water that is diverted from the creek may contain sediment, nutrients, and other constituents and can increase the instream temperature by four to five degrees.

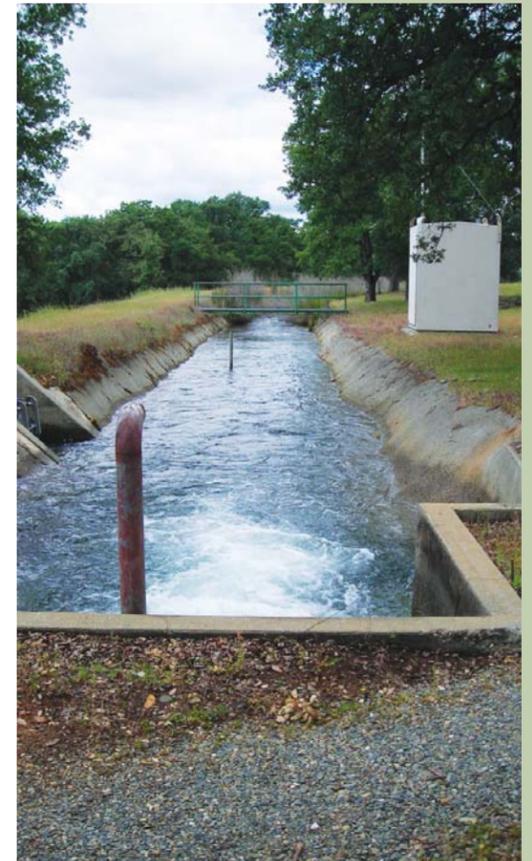
By capturing and recycling 10 cubic feet per second of irrigation return flows, the District will reduce the thermal loading to the Yuba River and reduce loadings of nutrients, pesticides, and suspended sediment currently discharged to the river. BVID will continue to meet existing minimum flow requirements with releases of cool, good quality water from Collins Lake.

Use of recaptured tailwater for the rice fields will reduce BVID diversions of cool surface water from the Yuba River. This substitution retains cool water in the Yuba River, which benefits aquatic habitat.

Use of warmer irrigation return flows for irrigation of rice has the potential to increase rice production. The potential for yield reduction due to cold temperature has been well documented, and the longer the crop is exposed to water below the threshold temperature, the more pronounced the yield reduction. In particular, the longer plants are exposed to water temperatures of less than the threshold temperature of 68° Fahrenheit for the first six weeks, the greater the yield loss.

Using recycled tailwater for the rice field will reduce pumping lift and associated power use since pumping water from the Yuba River for the rice fields requires higher lift than pumping the recycled water.

The Browns Valley Irrigation District Agricultural Return Flow Recapturing Project will provide multiple benefits by improving water quality in the Yuba River while providing reliable high temperature water for rice fields within the District.



Pump Line Canal

Warmer irrigation return flows will be delivered to the Pump Line Canal for use in irrigation of rice fields, potentially increasing rice production.