

PUTAH SOUTH CANAL
**EXPANDING
THE REACH**

Restored and maximized the width of the Maintenance Road under the superstructure

Preserved height clearances for heavy equipment

Minimized the overall footprint of the Brackett Bosker® Raking Machine



THE CHALLENGE

The Putah South Canal (PSC) is part of the Federal Solano Project constructed in the 1950s by the U.S. Bureau of Reclamation (USBR) to meet water demands of agriculture, municipal, industrial, and military facilities within Solano County in California. The PSC serves almost 500,000 residents and over 75,000 acres of irrigated land in Solano County.

Stored water in Lake Berryessa is released into Putah Creek and travels downstream through 6-miles of natural creek channel to Lake Solano. At Lake Solano, water is impounded by the Putah Diversion Dam and diverted into the PSC via a gravity-fed facility with a trash rack (bar screen) structure to collect the numerous debris and large quantities of aquatic vegetation in Putah Creek and Lake Solano. Most of the debris ends up on the trash rack structure during storm events and during peak water demands. As debris accumulates on the trash racks, PSC flows are reduced potentially impacting SCWA customers and thereby requiring manual raking of the trash racks by operations staff. This takes a significant amount of time and creates various safety issues when required at night or during large storm events.

OVIVO'S SOLUTION

In 2011 Ovivo was approached by SCWA to find the best possible solution for cleaning the PSC facility trash racks. Ovivo recommended the fully automatic, heavy-duty Brackett Bosker® Raking Machine, with a lifting capacity of 1,100 lbs. The Brackett Bosker system travels along a monorail over the intake with one gripper that is capable of cleaning the entire face of the trash racks without the need of ancillary equipment (such as a conveyor belt or a front loader) to transport the debris off the deck structure.

After approval of the proposed design by PSC and SCWA, the project received the green light to proceed in 2014. The selected design has not one, but two heavy-duty Brackett Bosker trolleys and grippers on the same monorail - one in operation and the other in standby - ensuring 100% system availability for removal of debris accumulated on the structure, in all weather conditions, at any time of day.

To avoid imposition on other government agencies jurisdiction over the land above the canal, Ovivo proposed adding a superstructure to the design, an 84' truss, spanning between two columns located outside the perimeters with special arrangement to support the overhead monorail.



The system was commissioned in March 2016 and it is fully functional and ready for the high flow irrigation season.