

ITEM: 9

SUBJECT: Stockton Deep Water Ship Channel Low Dissolved Oxygen TMDL
– *The Use of Aeration as an Alternate Measure to Address Low Dissolved Oxygen*

BOARD ACTION: No Board action required, information item only.

BACKGROUND: In 2007, a Basin Plan Amendment and TMDL were adopted to address the low dissolved oxygen impairment in the Stockton Deep Water Ship Channel. In the TMDL's Control Program, it stated the Regional Board would consider alternate measures, as opposed to direct control, if the measures adequately addressed the impact on the dissolved oxygen (DO) impairment and did not degrade water quality in any other way. In 2003, a peer review of DO studies suggested aeration as a means of increasing DO levels in the channel. Aeration was also proposed as one component of the San Joaquin River Steering Committee's 2003 DO TMDL Implementation Plan. Using funds from Proposition 13, the Department of Water Resources (DWR) constructed a full-scale aeration facility in 2007 at the west end of Rough and Ready Island at the Port of Stockton. Based on aeration feasibility studies, the facility was designed to deliver 10,000 lb of DO to the channel. Beginning in June 2008, the facility was operated under a two-year demonstration phase that ended in September 2010. The goals of the project were to evaluate water quality benefits associated with the delivery of 10,000 lb of oxygen per day and to gather additional information on impacts that may occur as an unintended consequence of large-scale aeration. DWR and their consultant, ICF International, will present information on the results of the two-year demonstration project in order for the Board to consider aeration as an alternate measure to address the low dissolved oxygen impairment. The performance of the aeration facility will be evaluated based on answering such questions as whether the facility can be used to meet the DO objectives in the channel under various flow conditions and whether the facility is appropriately located to improve low DO.

RECOMMENDATION: No recommendation; however, stakeholders are interested in the Central Valley Water Board's opinion on using aeration as an alternate means to increase dissolved oxygen in the channel.

Mgmt. Review _____

Legal Review _____

February 03, 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670