California Regional Water Quality Control Board

Central Valley Region

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SUBJECT: COMMENTS ON THE NOTICE OF PREPARATION FOR THE SOUTH DELTA IMPROVEMENTS PROGRAM ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT (EIR/EIS)

Background:

The San Joaquin River through the Stockton Deep Water Ship Channel (DWSC) experiences regular violations of the dissolved oxygen water quality objectives contained in the Central Valley Regional Water Quality Control Board (RWQCB) *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan). This impairment has occurred in all months of the year, but most often happens between June and October. Low dissolved oxygen may act as a barrier to upstream spawning migration of Chinook Salmon and may stress and kill other resident aquatic organisms. In 1998 the State Water Resources Control Board (SWRCB) approved a Clean Water Act Section 303(d) list that includes this impairment. The RWQCB has committed to submit a Dissolved Oxygen Total Maximum Daily Load (TMDL) Report to the U.S. EPA by June 2003 and a Basin Plan Amendment to formally adopt the TMDL and its implementation plan by June 2004. A phased approach to this TMDL is being considered because of its size and complexity. A phased approach will allow some initial implementation actions to proceed, based on our current understanding of the problem, while further studies are performed to provide information needed to develop a permanent solution. It is currently envisioned that the implementation plan and associated California Environmental Quality Act (CEQA) documentation for a permanent solution will be completed in the summer of 2008.

Modeling and field studies have demonstrated that flow is a major factor influencing oxygen concentration in the DWSC. This includes DSM2 modeling of barrier operations performed by the California Department of Water Resources in June 2002, which identified significant potential benefits to dissolved oxygen concentrations in the DWSC. Flow affects dissolved oxygen in the DWSC by controlling both the loads of oxygen demanding substances from upstream of the DWSC and their assimilation once in the DWSC. The net effect is that increased flow improves dissolved oxygen concentrations; flows greater than 2,000 cfs eliminate the problem. In its Water Right Decision D-1641,

the SWRCB also identified flow in the San Joaquin through the DWSC as the largest single controllable factor that affects dissolved oxygen. Modeling and analysis have shown that a barrier at the head of Old River can increase flow through the DWSC and be effective in improving dissolved oxygen conditions. In Section 9 of D-1641 the SWRCB encouraged the parties involved in constructing and regulating the barriers to consider their effects on dissolved oxygen and to make their best efforts to achieve the benefits of the barriers to dissolved oxygen while avoiding or mitigating their adverse effects. The SWRCB committed to evaluate the need for further actions after the RWQCB developed and implemented a TMDL.

In 1968 an agreement between the California Department of Fish and Game, California Department of Water Resources, U.S. Bureau of Reclamation and U.S. Fish and Wildlife Service was signed that described temporary barrier operations at the head of Old River and flow augmentation strategies that would be implemented to help maintain acceptable dissolved oxygen conditions in the DWSC. In the 1995 *Water Quality Control Plan for the San Francisco Bay / Sacramento-San Joaquin Delta Estuary* (1995 Bay/Delta Plan) the SWRCB referenced this agreement as the basis for its 6.0 mg/l dissolved oxygen objective. Both this agreement and 1995 Bay/Delta Plan identify flow through the DWSC as a critical factor affecting dissolved oxygen conditions.

Unfortunately, we note that the EIR/EIS scoping document does not mention the effect of barriers upon flow and dissolved oxygen in the DWSC.

Comments:

1. Decreases in flow in the San Joaquin River through the DWSC have been demonstrated to worsen the dissolved oxygen impairment. The EIR/EIS must address how the various proposed alternatives will impact flow in the DWSC and the dissolved oxygen impairment. The EIR/EIS must also describe how any negative impacts of the selected alternative(s) will be mitigated.

2. To the extent that future flows in the San Joaquin River past the head of Old River are controlled by barrier operations, this EIR/EIS needs to provide an estimate of the maximum amount of flow that can be reliably routed through the DWSC each month of the year. This information is needed so the TMDL can quantify loads of oxygen demanding substances from upstream of the DWSC and to determine the assimilation capacity of the DWSC. The RWQCB may request, as part of the TMDL Basin Plan Amendment process, that the SWRCB, through its authority, require that these proposed flows be permanently maintained.

3. RWQCB staff believes a discussion about the applicability of the 1968 agreement between the California Department of Fish and Game, California Department of Water Resources, U.S. Bureau of Reclamation and U.S. Fish and Wildlife Service should be included in the EIR/EIS. This agreement describes important mitigation actions involving flow and operation of the head of Old River barrier for improving dissolved oxygen conditions in the DWSC.

Thank you for the opportunity to provide our comments. If you have any questions regarding our comments please call Chris Foe at (916)-255-3113.