

June 26, 2012

Ms. Janice Pinero
Endangered Species Act Specialist
Bureau of Reclamation, Bay-Delta Office
801 – I Street, Suite 140
Sacramento, CA 95814



Scoping Issues: EIS for Remanded BOs on the Coordinated Long-Term Operation of the CVP and SWP

Dear Ms. Pinero:

The East Bay Municipal Utility District (EBMUD) appreciates this opportunity to provide comments for use by Reclamation and the federal resource agencies in development of the remanded biological opinions.

As you may know, EBMUD has a strong commitment to sustaining and enhancing the populations of fall-run Chinook salmon and Central Valley steelhead in the Mokelumne River below Camanche Reservoir. The Mokelumne fishery is a critical component of the overall Delta fishery and the Mokelumne salmon fall run is one of the few Central Valley runs nearly meeting the Central Valley Act Improvement Act doubling goal based on average production for the period 1992-2010. Given its significance, it is important that the Mokelumne fishery be given specific attention to ensure that any operational actions that could inadvertently harm the fishery be avoided or fully mitigated.

EBMUD works closely with the resource agencies in managing the Mokelumne fishery, especially under the framework of the Lower Mokelumne River Partnership (Partnership), which is made up of representatives from the California Department of Fish and Game, the United States Fish and Wildlife Service, and EBMUD.

Specific comments are provided as follows:

1. The analysis of all alternatives should address the effects of Delta Cross Channel gate closures to enhance in-migration and reduce straying of Mokelumne- and Cosumnes-origin Central Valley Steelhead and Fall Run Chinook salmon. Straying rates of Mokelumne origin salmonids to other systems, particularly the American River, have exceeded 70% in past years based on analysis of coded wire tag returns. In reviewing the data, the Partnership identified several factors that can influence straying including but not limited to tributary flow operations, Delta water management operations (including Delta Cross Channel gate operations), temperature, and planting practices for hatchery fingerlings and smolts. The table attached depicts the migration timing of Mokelumne origin juvenile and adult salmonids in relation to proposed

Delta Cross Channel gate operations. During October, adult salmonids migrating to the Mokelumne may be influenced by Sacramento River flows being diverted through the Delta Cross Channel. Working with operators from EBMUD, Department of Water Resources, and Reclamation, the Partnership developed a number of adaptive management actions to test their effect on stray rates and total escapement. These actions include closures of the Delta Cross Channel gates and attraction releases from Camanche Reservoir. Since implementation of the adaptive management actions, straying of Mokelumne River salmon to the American River has been reduced to levels below 10%. Furthermore, Mokelumne River returns since 2009 have been well above long-term average with 2011 being more than 400% of average. In fact, 2011 Chinook salmon escapement to the river was the highest observed since 1940. The early successes of the adaptive management actions warrant further evaluation within the context of the EIS for the OCAP BO.

2. The analysis of all alternatives should address the role of export pumping in exacerbating entrainment and predation of juvenile Central Valley Steelhead and Fall Run Chinook entering the Delta from the Cosumnes and Mokelumne Rivers. Current actions under BOs that are to be replaced are focused to a large degree on protecting salmonids originating from the Sacramento basin. A fact often overlooked is that naturally produced salmonids from the Mokelumne and Cosumnes rivers have no migratory alternatives other than the central Delta. Therefore, analysis of alternatives should address and mitigate impacts to migrating juvenile salmonids originating from the Mokelumne and Cosumnes rivers. In a recent telemetry study by Perry, *et al*¹, survivorship of juvenile Chinook salmon migrating through the central Delta was observed to be significantly lower than that of those remaining in the Sacramento River. Brandes and McClain² estimated that mortality of winter-run, spring-run and Central Valley steelhead juveniles diverted into the central Delta ranged from 33 to 95 percent, depending on a variety of factors. Mortalities are generally attributed to increased residence time, a longer migration route, reverse flows, altered salinity gradient, predation, elevated water temperatures, contaminants, and reduced food supply (California Department of Fish and Game³; McEwan⁴; Vogel⁵).

¹ Perry, R. W., P.L. Brandes, P.T. Sandstrom, A. Amman, B. MacFarlane, A.P. Klimley and J. R. Skalski. 2009. Estimating survival and migration route probabilities of juvenile Chinook salmon in the Sacramento-San Joaquin River Delta. North American Journal of Fisheries Management.

² Brandes, P. and J. McLain. 2001. Juvenile Chinook salmon abundance and distribution, and survival in the Sacramento-San Joaquin Estuary. In: Brown RL, editor. Fish Bulletin 179: Contributions to the biology of Central Valley Salmonids. Volume 2. Sacramento (CA): California Department of Natural Resources.

³ California Department of Fish and Game. 1998. A status review of the spring run Chinook salmon in the Sacramento River drainage. Report to the Fish and Game Commission. Candidate species status report 98-1. June 1998. Sacramento, California. 394 pages.

⁴ McEwan, D. 2001. Central Valley steelhead. In R .L. Brown (editor), Contributions to the Biology of Central Valley Salmonids, Volume 1, pages 1-44. California Department of Fish and Game, Fish Bulletin 179.

⁵ Vogel, D.A. 2004. Juvenile Chinook salmon radio-telemetry studies in the northern and central Sacramento-San Joaquin Delta, 2002 – 2003, Final Report. Contract report for CALFED, administered by the National Fish and Wildlife Foundation. Natural Resource Scientists, Inc. January 2004. 188 p.

3. Cumulative effects regarding entrainment and predation of juvenile Central Valley Steelhead and Fall Run Chinook entering the Delta from the Cosumnes and Mokelumne Rivers should be analyzed for the San Joaquin River Restoration flows including return of Millerton releases via the export pumps. The primary outmigration period of juvenile salmonids from the Mokelumne River is February through June. These fish use the lower San Joaquin River, including portions of the Old and Middle River channels, as a migration corridor to the ocean and are vulnerable to entrainment by flows in these channels towards the export pumps.
4. In analyzing the proposed OCAP BO alternatives as they relate to “reduction of negative hatchery influences on natural populations,” it is important that the project effects be identified prior to determining potential effects of hatchery operations. While hatchery operations may have some negative influence on naturally produced salmonids in the Mokelumne River, the most influential selective pressure is the reduced survivorship associated with the central Delta. As mentioned in item 2, all of the naturally produced salmonids from the Mokelumne and Cosumnes rivers must migrate through the central Delta and will experience significantly reduced survival when compared to those salmonids migrating out through the Sacramento River. Any analysis involving hatchery influences within the Mokelumne River salmonid population must first account for the selective pressure of reduced survival in the central Delta.
5. All operating or soon-to-be-operating water diversion projects in the area addressed by the remanded BOs should be included in the baseline case as well as all alternatives. The projects to be included in the analysis should include the newly constructed diversion facilities at Red Bluff (and the removal of the seasonal barrier on the Sacramento River at Red Bluff), the new Contra Costa County water District diversion works on Victoria Canal, the newly constructed Delta-Mendota Canal/California Aqueduct Intertie, and the Freeport Project serving EBMUD and the Sacramento County Water Agency.

Again, EBMUD appreciates the opportunity to provide these comments. We would be pleased to answer any questions about the points we have raised in this letter or to provide further information for your analysis.

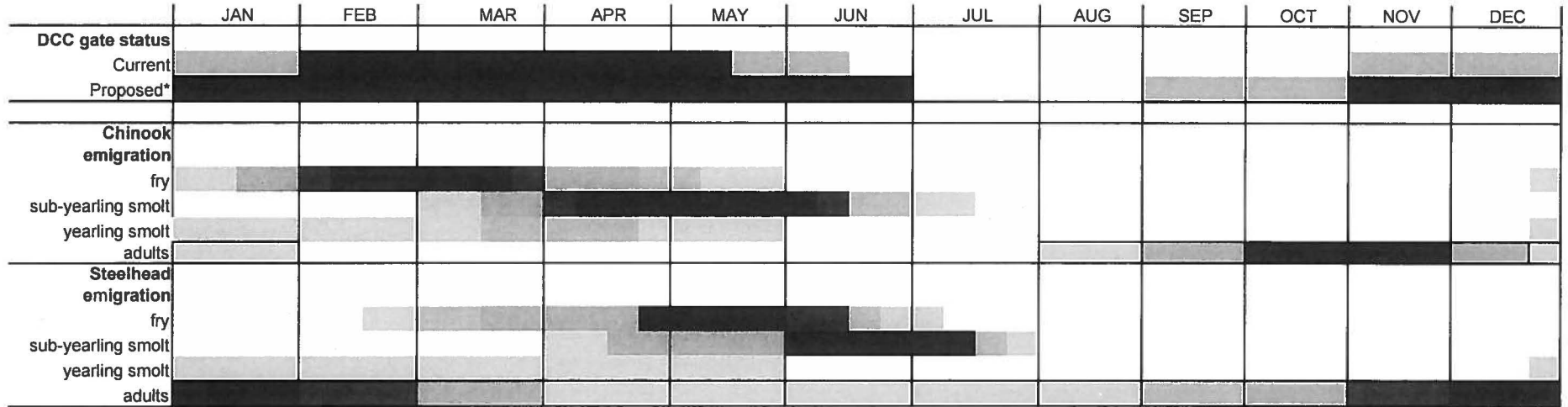
Sincerely,



Richard G. Sykes
Director of Water & Natural Resources

cc: David Gore, Bureau of Reclamation
Kent Smith, California Department of Fish and Game
Daniel Welsh, U.S. Fish and Wildlife Service
Maria Rea, National Marine Fisheries Service

Timing of Chinook and Steelhead migration (Woodbridge Dam passage) compared to current and proposed DCC operation.
 Fish data accrued from 1996-2010.



* Proposed Delta Cross Channel (DCC) gate operation is as defined in early base case development for the BCDP project; to EBMUD's best understanding this definition was consistent with the 2009 NMFS BO RPAs

DCC gate status
 Closed
 Part-month Closed
 Open

Fish Concentrations
 High
 Low