UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

February 27, 2014

Mr. Paul Fujitani
Acting Operations Manager, Central Valley Project
U.S. Bureau of Reclamation
3310 El Camino Avenue, Suite 300
Sacramento, California 95821

Dear Mr. Fujitani:

Thank you for your February 20, 2014, proposal and request to implement the Old and Middle River (OMR) Index Demonstration Project (OMR Project). As you have indicated, NOAA's National Marine Fisheries Service's (NMFS) biological and conference opinion on the long-term operation of the Central Valley Project (CVP) and State Water Project (SWP, CVP/SWP Opinion), reasonable prudent alternative (RPA) Action IV.2.3 requires Old and Middle River (OMR) flow management (beginning on page 74 of the 2009 RPA with 2011 amendments, http://www.westcoast.fisheries.noaa.gov/publications/Central_Valley/Water%20Operations/Operations,%20Criteria%20and%20Plan/040711_ocap_opinion_2011_amendments.pdf). RPA Action IV.2.3 requires tidally-filtered daily OMR flow values reported by the U.S. Geological Survey (USGS, monitoring stations at Old and Middle rivers near Bacon Island) to compute 14-day and 5-day running averages.

According to the description of the OMR Project, the U.S. Bureau of Reclamation (Reclamation) proposes to:

1. Utilize an OMR index (Hutton 2008) to operate to the required 14-day running average requirement in RPA Action IV.2.3;
2. Eliminate the 5-day running average requirement; and
3. Implement the demonstration project indefinitely, until further information emerges as a result of project implementation, or if NMFS and the U.S. Fish and Wildlife Service (USFWS) provides direct guidance or suspends implementation of the OMR Project if it appears that the 14-day running average compliance as calculated by the index method is varying too much from the measured data.

NMFS appreciates the complexities associated with determining OMR flow, which integrates a complex set of hydraulic conditions, including CVP and SWP exports, flows from the large and small tributaries to the Delta, daily and neap-spring tidal variation, atmospheric pressure, local agricultural diversions, and wind, and understands Reclamation's desire to operate to an OMR index. Therefore, NMFS supports Reclamation's proposal to utilize the OMR index in lieu of the tidally-filtered daily OMR flow values reported by the USGS. NMFS also supports the close

monitoring and reporting of both the USGS tidally-filtered gage data and the OMR index values to ensure compliance with Action IV.2.3 during ongoing weekly coordination meetings [*e.g.*, Delta Operations for Salmon and Sturgeon (DOSS), Water Operations Management Team (WOMT)].

Reclamation proposes to eliminate the 5-day running average requirement, to "allow operators to 'ride out' daily OMR flow fluctuations without having to continuously adjust exports." NMFS understands that daily and 5-day running average OMR flows can fluctuate widely. Therefore, as part of Action IV.2.3, NMFS built in some flexibility in allowing the 5-day running average OMR flows to be no more than 25 percent more negative than the targeted flow requirement (see footnote 13 on page 75 of the 2009 RPA with 2011 amendments) to accommodate these fluctuations. Guerin (2014, page 7) acknowledged that, "In comparisons of these two methods, it became evident that the 14-day running average comparison was the most reliable as it smoothed out the tidal variation in the USGS data, moderating differences in the base data used for the computations. However, there were differences in the individual water years and in some cases the differences in the 5-day running averages were less variable than in others, and therefore more reliable for comparison." Although NMFS thinks that Action IV.2.3 already provides the flexibility that Reclamation is seeking in order to "ride out" daily OMR flow fluctuations, we wish to continue discussion with you about the need and evaluation of the biological impact of eliminating the 5-day average period. Therefore, we are including conditions (below) for concurring on the elimination of the 5-day running average.

In addition, Reclamation anticipates that the OMR Project will remain in place indefinitely, with provisions that NMFS and the USFWS could provide direct guidance or suspend implementation of the OMR Project if it appears that the 14-day running average compliance as calculated by the index method is varying too much from the measured data. NMFS encourages Reclamation to implement the OMR Project for a trial period, then evaluate the results to determine if adjustments need to be made in its implementation before considering its use for a longer duration. For example, the OMR Project proposal, enclosed with your letter, acknowledges that, "In general, the analysis suggests that the OMR Index Demonstration Project would provide an accurate representation of measured OMR flows, albeit with sometimes considerable differences occurring during periods when San Joaquin River inflow and/or CVP/SWP exports were rapidly increasing or decreasing." CVP/SWP exports may be rapidly increasing or decreasing as a result of action responses to no more negative OMR flows than -3,500 cfs or -2,500 cfs, depending on fish density triggers. It is during these times where the management of OMR flows is more important to creating more suitable hydraulic conditions to enhance the likelihood of salmonids successfully exiting the Delta and Chipps Island (see objective of Action IV.2.3). For this first year operating to the OMR index, NMFS requests that Reclamation present the results of the OMR Project to the Independent Review Panel (IRP) during the 2014 annual review, as required in section 11.2.1.2 of the CVP/SWP Opinion (page 9 of the 2009 RPA with 2011 amendments). Following the receipt of the IRP report with its recommendations (usually in mid-December), NMFS encourages Reclamation to convene an interagency team (with representatives from Reclamation, NMFS, California Department of Water Resources, USFWS, and California Department of Fish and Wildlife) to determine how best to incorporate or address each IRP recommendation.

In summary, NMFS concurs that Reclamation can operate to the OMR index in lieu of the tidally-filtered daily OMR flow values reported by USGS to operate to the 14-day running

average of OMR flow, pursuant to RPA Action IV.2.3. This concurrence is conditioned on the following terms:

1) Provide reporting on a weekly basis to DOSS and WOMT on the difference between operating to the OMR index and the tidally-filtered USGS gages at the 5-day and 14-day running averages;
2) Within four weeks, provide to NMFS a study and evaluation plan for the demonstration project that, at a minimum, shows how any effects of changed operations will be monitored, evaluated and reported to NMFS and the IRP.
3) Reclamation present the results of the OMR Project to the IRP during the 2014 annual review.
4) The OMR Project is based on a fixed term, initially set for one year, subject to modifications based on real-time information, and that operations will revert to the RPA, as written, should any unanticipated adverse effects occur.

NMFS has determined that the OMR Index Demonstration Project, as conditioned above, will have no additional adverse effects on the listed anadromous fish species and Southern Resident killer whales and designated critical habitats than were considered in the CVP/SWP Opinion. This determination is made with the understanding that this is a fixed term demonstration project, initially set for one year, subject to modification based on real-time information, and that operations will revert to the RPA, as written, should any unanticipated adverse effects occur.

I look forward to further communication between our agencies to implement the OMR Project. If you have any questions regarding this letter, please feel free to contact Mr. Garwin Yip, of my staff, at (916) 930-3611, or via e-mail at garwin.yip@noaa.gov.

Sincerely,

Maria C Rea

Maria C. Rea
Assistant Regional Administrator
California Central Valley Area Office

cc: Copy to file – ARN 151422SWR2006SA00268
Kim Turner, USFWS, 650 Capitol Mall, Suite 5-100, Sacramento, California 95825

References:

Guerin, M. 2014. OMR flow analysis WY2009 to WY2013: Comparison of CDEC/USGS and Hutton/MWD index methods. Resource Management Associates. Final Report prepared for the San Luis and Delta Mendota Water Authority. 58 pages.

Hutton, P. 2008. A model to estimate combined Old and Middle River Flows. Metropolitan Water District. Final Report. 90 pages.