

National Marine Fisheries Service (NMFS) Determination:

Action IV.2.3 of the Biological Opinion for the Long-Term Operations of the Central Valley Project and State Water Project (Opinion)

January 25, 2011

Summary of Action and Advice from the Delta Operations for Salmonids and Sturgeon (DOSS) group:

Summary of Action: Old and Middle River Flow Management (Action IV.2.3, p. 648-652 of the NMFS Opinion)This action applies from January 1st through June 15 of every year, and calls for Old and Middle River (OMR) flows to be managed to no more negative than -5000 cfs throughout the action period, with more positive OMR targets called for if any of four triggers are met. The more positive net OMR flows are to be maintained for at least five days; management to a more negative OMR limit may resume when average daily fish density is less than trigger density for the last 3 days of export reduction. For the 2011 water year, the four triggers (see NMFS Opinion for full details) are:

	First stage	Second stage
Trigger 1	3.32 fish*/TAF	6.64 fish*/TAF
Trigger 2	8 fish*/TAF	12 fish*/TAF
Trigger 3	0.5% cumulative CWT recovery of specified releases	0.5% cumulative CWT recovery of specified releases
Trigger 4	8 unclipped steelhead/TAF	12 unclipped steelhead/TAF

*all Chinook salmon, except hatchery fish, above the minimum length-at-date for winter-run Chinook salmon, based on the "delta model" length-at-date table.

Background on DOSS Advice

Based on evaluation of the fish salvage and loss data, the first trigger (at the first stage level) under Action IV.2.3 was exceeded last Thursday, 1/20/11 (preliminary data indicated the loss density was 4.37 fish/TAF). Estimated daily loss was 86.6 fish at the SWP and 2.72 fish at the CVP. WOMT held an emergency meeting on Friday afternoon and decided to implement export reductions at the SWP starting on Sunday 1/23/11. OMR flow was reduced on Monday from -5000 cfs to -4000 cfs and further reduced by continued export reductions at the SWP. By Tuesday, 1/25, OMR was no more than 25% more negative (-4375 cfs) than the target OMR flow of -3500 cfs. Since the OMR trigger was exceeded last Thursday, 1/20/11, the combined older juvenile Chinook salmon loss density has dropped to below 2.0 fish/TAF. DOSS expects combined older juvenile Chinook salmon loss to remain low for the remainder of the week due to the decrease in exports and decrease in river flows.

DOSS Advice (from 1/25/11 meeting)

The DOSS advice to the WOMT and NMFS is for the CVP/SWP to maintain -3500 cfs OMR through Thursday (the 5th consecutive day of the OMR action), and then transition back to an

OMR no more negative than -5,000 cfs on Friday, unless a fish trigger is exceeded Tuesday, Wednesday, or Thursday this week. This will meet the OMR flow and fish density requirements in Action IV.2.3 of the NMFS Opinion and provide enough time for older juvenile salmonids to find their way out of the interior Delta.

NMFS Determination

NMFS accepts the advice from DOSS and determines that operating to an OMR flow of no more negative than -3500 cfs from Sunday 1/23 through Thursday 1/27 is consistent with Action IV.2.3 and will provide a sufficient level of protection for older juvenile Chinook salmon residing within the interior Delta. Consistent with the DOSS advice, this determination is predicated on the assumption that the combined older juvenile loss density is lower than the trigger density of 3.32 fish/TAF on 1/25, 1/26, and 1/27. This action may potentially improve conditions for other listed species (*i.e.*, Delta smelt, steelhead, and green sturgeon) as well, by providing more positive flow in the south Delta.