



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
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FEB 04 2011

Jason Phillips
Area Manager
Klamath Basin Area Office
Bureau of Reclamation, Mid-Pacific Region
6600 Washburn Way
Klamath Falls, OR 97603

Dear Mr. Phillips:

This letter is in response to your February 4, 2011 letter requesting a determination whether the Bureau of Reclamation's (Reclamation's) proposed flow variability recommendation is consistent with the National Marine Fisheries Service's (NMFS') 2010 biological opinion (Opinion) on Reclamation's Klamath Project Operations 2010-2018.

In our 2010 Opinion, NMFS identified the anticipated effects of increasing fall and winter flow variability to include the disruption of habitat that is conducive to the life history of the salmonid disease pathogens *Ceratomyxa shasta* (*C. shasta*) and *Parvicapsula minibicornis* (*P. minibicornis*). NMFS anticipated the implementation of the fall and winter flow variability program would result in lowering disease rates among juvenile coho and Chinook salmon the following spring. For these reasons, NMFS' Reasonable and Prudent Alternative (RPA) includes a flow variability program.

NMFS has reviewed Reclamation's flow variability schedule proposed for February 2011 and evaluated its effects on Southern Oregon/Northern California Coast (SONCC) coho salmon. We have determined that the proposed flow variability schedule will result in habitat disruption of *C. shasta* and *P. Minibicornis* and achieve the goal of lowering disease rates among juvenile coho and Chinook salmon during the spring of 2011.

NMFS has also evaluated the potential effects of the proposed ramp-down rates on stranding juvenile (*i.e.*, fry, parr, yearling, smolt) SONCC coho salmon. In our RPA, we determined ramp-down rates are required to be consistent with those described in the *Proposed Action* section of the Opinion, unless otherwise evaluated and determined to not result in additional adverse effects to coho salmon as described in the Opinion. Reclamation proposes to reduce flows from a peak IGD flow of 5000 cfs to 3000 cfs, in a manner that is inconsistent with the *Proposed Action* section of the Opinion. Ramp-down rates below 3000 cfs are proposed in a manner that are consistent with the *Proposed Action* section of the Opinion; however, NMFS anticipates some deviation from the proposed ramp-down rates may occur due to PacifiCorp's operational constraints and given the use of the uncontrolled spillway at IGD when flows are greater than 1800 cfs. NMFS anticipates no coho salmon fry are likely



to be present in the mainstem Klamath River during the proposed flow event. Coho salmon yearlings and smolts that may be present are less vulnerable to stranding due to their ability to actively flee from risks of dewatering. Therefore, NMFS anticipates no adverse effects to SONCC coho salmon from the proposed ramp down rates beyond those already described in our Opinion.

NMFS understands that Reclamation is proposing to implement the flow variability program in February 2011 consistent with the hydrograph flow schedule described in Enclosure A with the expectation that PacifiCorp will make its best efforts to provide these flows at IGD after the J.C. Boyle facility is fully operational, within the operational constraints of PacifiCorp's facilities, and without compromising the safety of the facilities, the public, or PacifiCorp personnel. Based on our evaluation, NMFS finds that implementation of your proposed flow variability schedule is expected to benefit SONCC coho salmon as well as other anadromous salmonids in the spring of 2011 and will not result in greater effects to coho salmon and their designated critical habitat than what NMFS describes in our 2010 Opinion. Therefore, NMFS has determined that Reclamation's proposed flow variability recommendation is consistent with our Opinion, and that any incidental take of coho salmon associated with PacifiCorp's implementation of flow variability as described above is authorized under the Incidental Take Statement contained in the 2010 Opinion.

Please call me if you have any questions.

Sincerely,

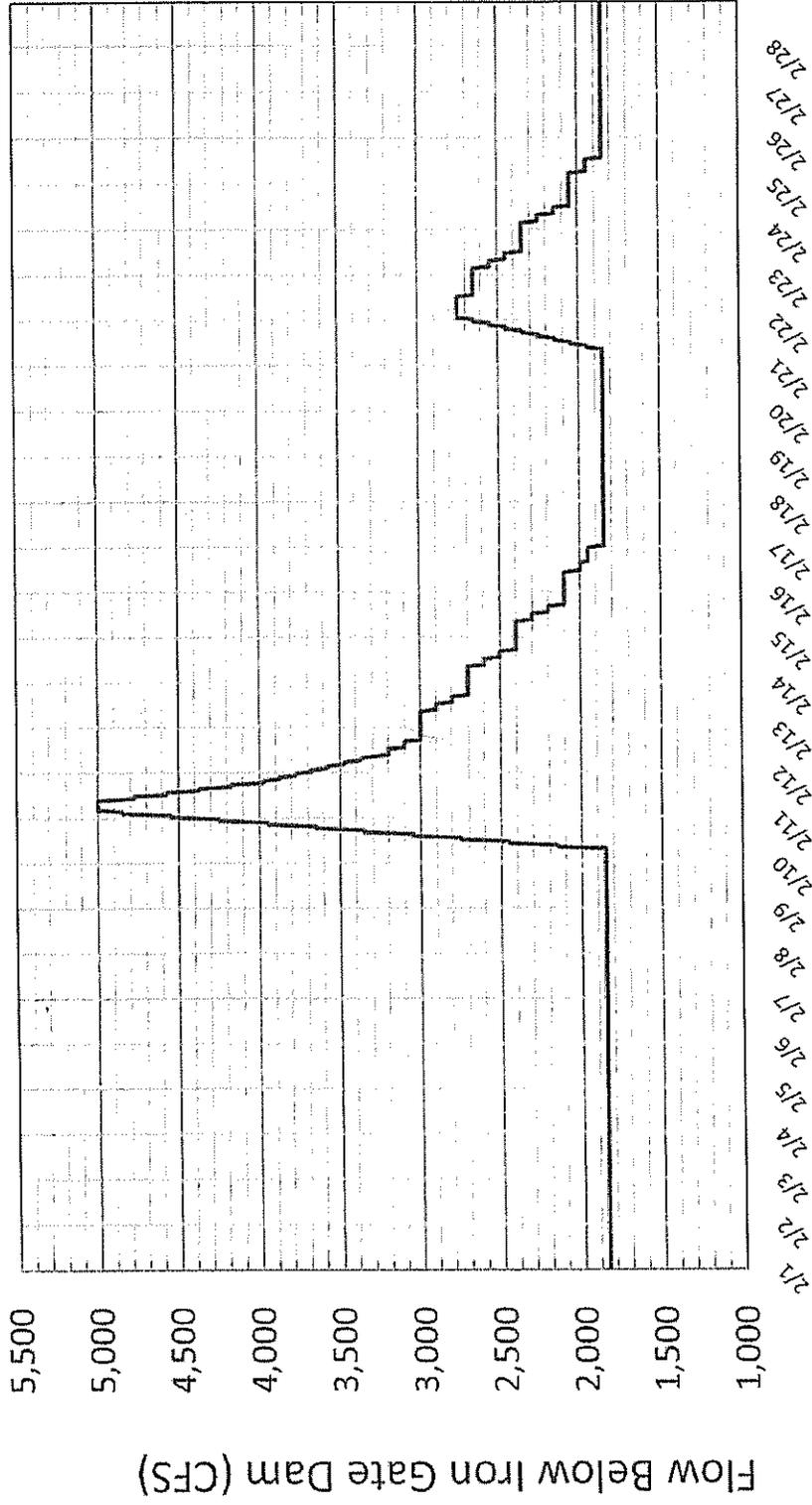


Irma Lagomarsino
Northern California Office Supervisor

Enclosure A

Enclosure A

Conceptual February 2011 Flow Schedule



Date

Notes: Objective of flow schedule is to release 18,600 acre-feet of water available for flow variability. Pulse flow timing may shift depending on natural flow conditions, operational constraints, or other factors. Hydrograph is conceptual and flows are targets given lack of precision in controlling spill at Iron Gate Dam.