



UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southwest Region

650 Capitol Mall, Suite 5-100

Sacramento, CA 95814-4700

FEB 4 2011

Kari Kyler
State Water Resources Control Board
P.O. Box 2000
Sacramento, California 95812-2000

Dear Ms. Kyler:

NOAA's National Marine Fisheries Service (NMFS) appreciates the opportunity to submit additional comments and information on the State Water Resources Control Board's (Board) review of and potential modifications to the Draft Technical Report on the Scientific Basis for Alternative San Joaquin River Flow and Southern Delta Salinity Objectives (Report). Potential modifications to the 2006 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary are of great interest to NMFS, as they directly relate to our mission which includes the management, conservation, and protection of anadromous fish resources.

The NMFS Protected Resources Division, Central Valley Office, is responsible for the administration of programs, laws, and acts that promote and support conservation, protection, and recovery of anadromous fish resources in Central California. Our primary responsibility is administration of the Endangered Species Act (ESA) of 1973, as amended [16 U.S.C. 1531 *et seq.*] with regard to listed salmonids and green sturgeon. Listed anadromous fishes inhabiting the Sacramento-San Joaquin Delta Estuary include the endangered Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley spring-run Chinook salmon (*O. tshawytscha*), threatened Central Valley steelhead (*O. mykiss*), and threatened Southern distinct population segment of North American green sturgeon (*Acipenser medirostris*). In addition, we assist in administering the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for essential fish habitat (EFH) for Pacific Salmon. The Sacramento-San Joaquin Delta Estuary and the San Joaquin River (SJR) and its tributaries are designated EFH for Central Valley fall/late fall-run Chinook salmon (*O. tshawytscha*).

We summarize our comments on the Report below and refer you to the enclosed materials for specific comments.

- 1) Inadequate flow to support fish and their habitats is directly and indirectly linked to many stressors in the San Joaquin River basin and is a primary threat to steelhead and salmon. We look forward to continuing to work with the Board and others on actions to improve flow volume and timing.
- 2) We support the flow schedules established in the NMFS Biological Opinion on long-term operations of the State Water Project and Central Valley Project and request that the Board consider adopting the Stanislaus River flow schedule as a minimum standard as part of the water code.



- 3) NMFS does not expect to enter into ESA consultation with the Federal Energy Regulatory Commission (FERC) regarding FERC project flows on the Merced and Tuolumne rivers until the ongoing relicensing efforts near completion in 2016, and we are concerned with the current fish habitat conditions in these rivers in the interim. The Board's pursuit of a comprehensive flow schedule for these rivers in the near term would improve conditions and support future efforts.
- 4) Overall, we are interested in the Board's approach to use the percent of unimpaired flow as a tool to develop flow criteria on the tributaries. We recommend assigning an annual multi-species flow schedule for each tributary based on water year type with adjustment provisions to accommodate flow criteria at Vernalis.
- 5) The water supply impacts of implementation of the proposed alternative SJR flow and southern Delta salinity objectives in the San Joaquin River watershed appear to be overestimated and we add caution when undertaking the future economic evaluation of those impacts.

We appreciate the opportunity to provide the Board with comments related to the Report and look forward to future workshops and topics. If you have any questions regarding this correspondence or if NMFS can provide further assistance, please contact Ms. Erin Strange in our Central Valley Office, 650 Capitol Mall, Suite 5-100, Sacramento, CA 95814. Ms. Strange may be reached by telephone at (916) 930-3653, or via email at Erin.Strange@noaa.gov.

Sincerely,


Maria Rea

Central Valley Area Office Supervisor

Enclosure

Enclosure 1

Other Stressors to Fish

NMFS acknowledges that there are many other stressors to fish in the San Joaquin River basin that are indirectly related to flow. As was noted at the January 6 and 7, 2011, workshop, many of these other stressors, such as water temperature, water quality (dissolved oxygen, contaminants, bacteria), too much or too little turbidity, and the presence of predators are indirectly influenced by river flow. Adverse effects if these stressors can be alleviated with higher flows.

NMFS released a public draft Recovery Plan for the evolutionarily significant units of Sacramento River winter-run Chinook salmon and Central Valley spring-run Chinook salmon and the distinct population segment of Central Valley steelhead (Plan) in September 2009, which identified many threats (stressors) to listed salmonids in the Central Valley including the San Joaquin River. Several of the threats of **High** importance identified for the Southern Sierra Diversity group (San Joaquin River Basin) involve *direct* impacts to salmonids during every life stage and their habitats from flow alterations. Several threats that are *indirectly* related to flow were also identified in the Plan such as: high water temperature, loss of natural river morphology and function, loss of riparian habitat and instream cover, predation, and poor water quality. NMFS has identified flow-related recovery actions needed to ameliorate these stressors. For example, releases to support all steelhead life history stages, dedicated instream flows for fish, evaluate the benefits of pulse flow attraction for adult steelhead, and negotiate water right purchases and/or increase flow releases. Clearly, inadequate flow in the San Joaquin River basin is a primary threat to steelhead and salmon. The State Water Resources Control Board's (Board) proposal is consistent with our Recovery Plan and could help recover salmon and steelhead.

San Joaquin Watershed Actions

Stanislaus

In the NMFS Biological Opinion on long-term operations of the State Water Project and Central Valley Project (NMFS BiOp), NMFS required a set of flow schedules based on water year type for the Stanislaus River. We feel these flow schedules are protective of salmon and steelhead in the Stanislaus River by ensuring at least a minimum flow to meet their life stage and habitat needs. We request that the Board consider adopting these schedules as a flow threshold to achieve at a minimum (e.g. not to fall below) as part of the water code.

Tuolumne and Merced

NMFS is currently engaged in the lengthy relicensing process for the Federal Energy Regulatory Commission (FERC) projects on the Merced and Tuolumne rivers. We have not yet entered into Endangered Species Act consultation with FERC regarding the instream flow impacts from these projects to salmon and steelhead and their habitats. For this reason, we support the Board's pursuit of a comprehensive flow schedule for these rivers.

San Joaquin River

NMFS is an implementing agency for the San Joaquin River Restoration Program and supports the flow schedule that is being implemented as part of the Stipulation of Settlement and the San Joaquin River Restoration Settlement Act, Title X of the Omnibus Public Land Management Act of 2009 (Federal enabling legislation). Such flows will contribute to the recovery of salmon and steelhead. The Vernalis flow standard should be modified to account for these added base flows without detracting from flow contributions from the Stanislaus, Tuolumne, and Merced rivers that benefit salmonids in those streams.

Implementation

Many comments received by the Board in writing and at the January 6 and 7, 2011, workshop regarding the Report involved the difficulty in implementing the percent of unimpaired flow concept. The Report would be strengthened by adding a specific flow schedule implementation plan for each of the tributaries to meet specific flow targets and a combined flow target at Vernalis. NMFS recommends employing one of two basic approaches; 1) base the flow release from each tributary reservoir on a percentage of inflow to the reservoir, adjusted to compensate for downstream losses and in order to meet a flow criteria at Vernalis, or 2) design a set flow schedule for each tributary based on water year type and adjust as necessary to meet tributary and Vernalis flow targets. The first approach, however, may not be sufficient to provide adequate rearing habitat for steelhead during the summer months since they are precluded from their native habitat upstream of the major dams. Flow accommodations would need to be made to protect steelhead during the low-flow summer period. The second approach would provide greater protection for fish if it were applied year-round to ensure beneficial flows for all fish life stages, and also would provide more consistent conditions for water supply allocations

Water Supply Impacts and Economics

NMFS believes that the potential water supply impacts from implementing flow releases recommended in the Report are overestimated. First, using a monthly average output from CALSIM does not capture the variability in the system and would tend to overestimate reductions in water supply. Second, the concept that additional instream flow needs would come from reductions in diversions because of a proportional decrease in return water and efforts to increase water use efficiency seems highly speculative. The basis for this assumption is not supported in the Report and greatly increases the magnitude of water supply impacts portrayed.

The Report indicates that the Board will conduct an economic impact analysis of the potential water supply impacts from increased instream flows. NMFS is concerned that if the Board's economic analysis employs the standard approach, the impacts will be overestimated. The NMFS Southwest Fisheries Science Center is preparing a report scheduled for release in Spring 2011, which will present an analysis of estimated employment impacts of reduced irrigation water deliveries in California's Central Valley.

Conclusions from the analysis indicate that employment impacts in areas affected by reduced water availability were negligible. Although it is plausible that irrigation water and employment are complementary inputs to production, the analysis indicates that the strength of these complementary inputs has been overestimated. In other words, the multipliers currently used for economic analysis related to agriculture water delivery are incorrect. It is possible that impacts are not realized due to; 1) alternative water sources are available to growers such as using groundwater to replace a portion of the San Joaquin/Delta water; and 2) reduced water availability may actually increase demand for labor in the short run by increasing the labor needed to install higher efficiency irrigation equipment or water nut trees by hand when water supply is low. NMFS will provide this report to the Board for your use as soon as it released and recommend that you consider using similar inputs for your economic analysis.