

Overview of the 2009 NMFS Biological Opinion on the Long-Term Operations of the Central Valley Project and State Water Project

TO: Chris Oliver, Assistant Administrator for Fisheries
FROM: Barry Thom, Regional Administrator, West Coast Region, National Marine Fisheries Service (NMFS), (503) 231-6266

THREE THINGS YOU MUST KNOW

- On June 4, 2009, NMFS issued to the U.S. Bureau of Reclamation (Reclamation) a jeopardy biological opinion (BiOp) on the long-term operation of the Central Valley Project (CVP) and State Water Project (SWP). Within the BiOp, NMFS offered a Reasonable and Prudent Alternative (RPA) comprising 72 actions within the Sacramento River and San Joaquin River basins. The RPA is designed to allow project operations in a manner which is not likely to jeopardize the listed species affected by CVP and SWP operations.
- The protective actions in the RPA were designed primarily to decrease in-river water temperatures, ensure adequate flows for various life-history stages, and improve fish passage and spawning success. NMFS tailored these protections to both meet the needs of these endangered and threatened fish while recognizing and minimizing impacts to other water supply users.
- In August 2016, based on new information related to multiple years of drought, Reclamation reinitiated consultation with NMFS. The CVP and SWP will continue to operate pursuant to the requirements of the 2009 long-term operation BiOp until the reinitiated consultation is complete and a new BiOp is issued.

BACKGROUND

The 2009 CVP/SWP operations BiOp concluded jeopardy and adverse modification of critical habitat for:

- Endangered Sacramento River winter-run Chinook salmon,
- Threatened Central Valley spring-run Chinook salmon,
- Threatened California Central Valley steelhead, and
- Threatened Southern Distinct Population Segment (DPS) of North American green sturgeon.

The BiOp also concluded jeopardy on Southern Resident killer whales (no designated critical habitat in the action area), and not likely to adversely affect Central California Coast steelhead and their designated critical habitats.

In general, the biggest stressors, and therefore, RPA actions (Figure 1), were focused on water quantity (e.g., minimum flow schedules) and quality (decreased water temperatures), habitat (gravel augmentation, improved rearing habitat), and safe rearing and passage (improved passage and decreased entrainment).

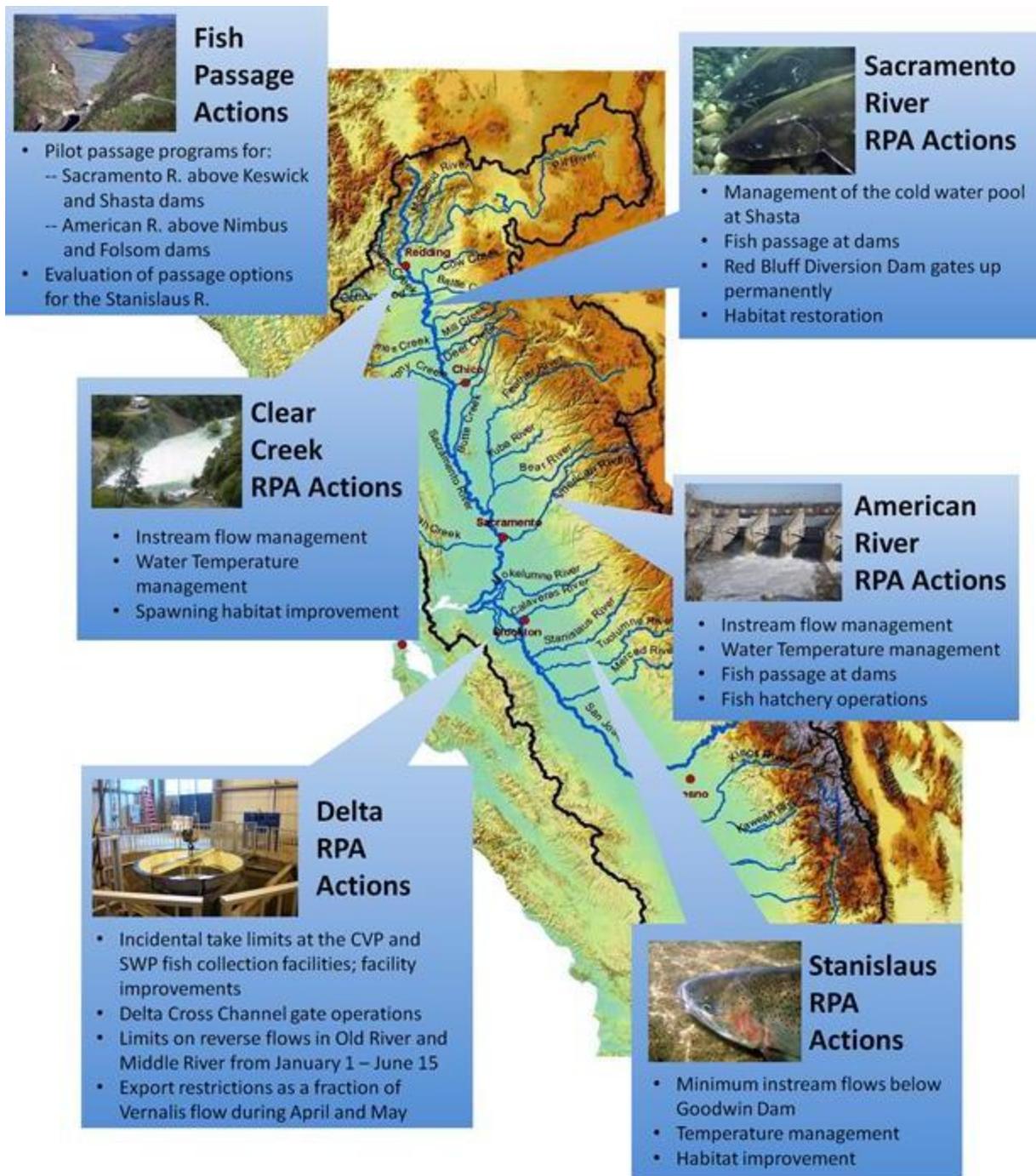


Figure 1: Map of California’s Central Valley with summary of the five suites of RPA actions.

Flexibilities: The RPA provides multiple flexibilities, including real-time operations based on monitoring triggers, phased-in implementation, performance-based approaches, incidental take limits based on estimated population sizes, actions tiered to water-year type or drought exceptions, and annual reviews that may result in adaptive management changes based on new science. Also, many RPA actions within the CVP/SWP Operations BiOp were much more conservative when initially drafted. For example, the San Joaquin inflow-to-export ratio action

was reduced from an initial 90-day action to a final 60-day action. Another example is that Old and Middle River (OMR) flow management was going to be initiated when juvenile winter-run Chinook salmon are first detected in the Delta, as early as October. However, in the final BiOp, the onset of the OMR flow management RPA action is set for January 1 of each year.

Peer Review: The CVP/SWP operations BiOp received several peer reviews. NMFS issued a draft BiOp in December 2008, which was peer reviewed by the Delta Stewardship Council's Delta Science Program (panel of 7 scientists), and also three desk reviews conducted through NOAA's Center for Independent Experts. The National Academy of Sciences, at the urging of Senator Diane Feinstein, peer reviewed the CVP/SWP operations BiOp following its issuance. The 15-member panel concluded that "On balance, the committee concludes that the actions, which are primarily crafted to improve life-stage-specific survival rates for salmon and steelhead, with the recognition that the benefits also will accrue to sturgeon, are scientifically justified."

Provisional acceptance of RPA by Reclamation: Reclamation provisionally accepted the RPA, indicating that it would immediately begin to implement the near-term elements of the RPA by modifying operations. However, Reclamation conditioned their provisional acceptance of the longer-term actions on the need to further evaluate and develop them. To date, Reclamation has not responded to NMFS regarding the longer term actions.

Litigation: Six cases (with claims on approximately 40 issues) were filed against NMFS, by water users, soon after the issuance of the CVP/SWP operations BiOp. In September 2011, the Eastern District Federal Court issued its memorandum decision wherein it ruled in favor of Federal defendants on approximately half the claims, and for water user plaintiffs on the other half. The Department of Justice filed an appeal to the United States Court of Appeals for the Ninth Circuit. In December 2014, the 9th circuit issued its opinion, reversing the components of the district court's opinion in which it invalidated the BiOp.

Highlighted Points of Note:

- The final RPA includes various flexibilities within specific RPA actions and more flexibility overall compared to the draft RPA.
- Some of the RPA actions, especially those related to habitat, facility improvements, or fish passage have not yet been completed. This delayed implementation further limits the scope for flexibility in operational elements of the RPA.
- NMFS has been working closely with Reclamation and other parties to provide technical assistance on flexibilities under the WIIN Act and the potential for new types of flexibility and adaptive management in the re-initiation effort.

RED FLAGS

- The OMR flow management and San Joaquin inflow-to-export ratio are RPA actions that result in the largest water supply impacts and have been the subject of the most scrutiny, including being the focus of the litigation associated with the BiOp and the impetus of the Water Infrastructure Improvement for the Nation Act of 2016 (WIIN Act).

- Uncertainty in the relationships between CVP/SWP operations and survival of the listed anadromous fish species may be caused by the concurrent and confounding influence of correlated variables, overall low survival, and low statistical power to detect differences. A 2014 Independent Panel concluded “Fish in the Delta are subject to a large number of stressors and untangling the independent effects of these stressors has proven very difficult.” Various agencies and water contractors often improperly infer that no statistical evidence of a single-factor effect (for example, OMR or I:E ratio) means that those factors have no effect on ESA-listed species despite the usually very-limited power of the study.
- Several RPA actions have been considerably delayed in their implementation, including improving salmonid rearing habitat in the lower Sacramento River, implementing a pilot reintroduction program upstream of Shasta Reservoir, and reducing predation within Clifton Court Forebay.