



## Board Report

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Workshop on the U.S. Army Corps of Engineers Re-Initiated Consultation with the National Marine Fisheries Service on the *“Biological Opinion for the Salinas Valley Water Project”*.

### BACKGROUND:

In June 2002, the Monterey County Water Resources Agency (MCWRA) applied to the U.S. Army Corps of Engineers (Corps) for a permit to construct the Salinas River Diversion Facility (SRDF) in the Salinas River near Marina, California. The SRDF is a component of the Salinas Valley Water Project (SVWP). The primary goals of the SVWP are:

- Stop seawater intrusion;
- Improve the long-term hydrologic balance between recharge and withdrawal; and
- Provide a sufficient water supply to meet existing needs and to serve as a foundation to meet future water needs.

Because steelhead trout (*Oncorhynchus mykiss*) are present in the Salinas River and listed as threatened under the Endangered Species Act of 1973, the Corps requested consultation with the National Marine Fisheries Service (NMFS) on the permit application. NMFS’s role is to ensure that the project will not jeopardize the continued existence of the species nor result in the adverse modification of designated critical habitat. The following timeline is adapted from National Marine Fisheries Service Biological Opinion Admin No. 151422SWR2003SR8711 which can be found on MCWRA’s website at:

<http://www.co.monterey.ca.us/home/showdocument?id=24204>

### TIMELINE:

- June 2002: Corps requested consultation with the NMFS on the permit application for the Salinas Valley Water Project.
- January 2003: NMFS determined the Biological Assessment (BA) was incomplete and requested additional information and defined the scope of the consultation to include all Nacimiento and San Antonio dam operations.
- June 2003: NMFS notified MCWRA that the flow criteria identified in the BA were flawed.
- December 2003: WRIME (MCWRA consultant) submitted “Hydrologic Analysis of Salinas River Flows in Response to NOAA Fisheries Request for Further Information on the Biological Assessment for the Salinas Valley Water Project”.
- March 2004: NMFS requested additional information not covered in the December 2003 report.
- April 2004: WRIME and MCWRA submitted “Amendment to December 2003 Report Hydrologic Analysis of Salinas River Flows” to NMFS.
- April 2005: NMFS presented “Salinas Valley Water Project Flow Proposal for the Biological Needs of Steelhead in the Salinas River” to MCWRA.
- April - August 2005: NMFS and MCWRA technical working group developed final flow prescription.
- October 2005: NMFS received the final “Supplement to the Biological Assessment for the Salinas Valley Water Project, Salinas River, California” (Final Biological Assessment), and the “Salinas Valley Water Project Flow Prescription for Steelhead Trout in the Salinas River” (Flow Prescription).  
Final Biological Assessment: <http://www.co.monterey.ca.us/home/showdocument?id=71823>

#### Flow Prescription:

<<http://www.co.monterey.ca.us/home/showdocument?id=24198>>November 2005-January 2006: Errata to the Flow Prescription drafted and submitted to NMFS.

- June 2007: “Biological Opinion for the Salinas Valley Water Project” issued by NMFS.
- July 2007: MCWRA BOD adopts addendum to Final Environmental Impact Report for the SVWP incorporating Flow Prescription.
- September 2008: Flow Prescription integrated into MCWRA water rights.
- April 2010: Salinas Valley Water Project constructed and operational.
- August 2016: Corps re-initiated consultation with NMFS on the “Biological Opinion for the Salinas Valley Water Project” relating to construction activities.

Discussions between the MCWRA and NMFS over the past two years have primarily focused on four points of concern:

1. Re-vegetation at the SRDF;
2. Raising the minimum releases requirement at San Antonio dam from 3 cubic feet per second (cfs) to 10 cfs;
3. Revising and updating the monitoring plan; and
4. Increasing steelhead passage days in the Salinas River, especially during dry years.

Additionally, NMFS has stated concerns over the Agency’s lack of resources and funding necessary to complete a Habitat Conservation Plan (HCP). Costs to complete the HCP and provide for necessary staffing have been estimated at approximately \$4.5 million over the next three years.

#### RE-VEGETATION AT THE SRDF CONSTRUCTION SITE:

The current Biological Opinion states that the standard of success for revegetation at the SRDF construction site is 80% survival of plantings or 80% ground cover for broadcast planting of seed after a period of three years. MCWRA has planted over 2000 trees at the SRDF with an approximate success rate of 3%. However, the entire site that was disturbed during construction is either hardscape or has been naturally re-vegetated with coyote bush and mixed herbaceous plants.

#### MINIMUM RELEASE REQUIREMENTS AT SAN ANTONIO DAM:

The Flow Prescription currently states that MCWRA will maintain a minimum release flow of 3 cfs from San Antonio Reservoir until such time as the surface elevation is at or below elevation 666 feet mean sea level, the reservoir’s minimum pool. MCWRA as a normal practice since 2008, has maintained a minimum release of 10 cfs, unless maintenance activities are occurring. NMFS has requested that the Flow Prescription be changed to reflect the normal practice of releasing 10 cfs.

#### MONITORING PLAN REVISIONS:

The Flow Prescription contains a monitoring plan for: (1) Physical Parameters, those parameters affecting steelhead passage, consisting of stream flows, channel characteristics, and water elevations/depths; (2) Habitat Parameters, consisting of water quality parameters affecting steelhead habitat; and (3) Steelhead Population, life-stage populations and trends. Since 2010, monitoring activities have taken place in the Salinas watershed and the insights gained on population parameters of steelhead include:

- The vast majority of steelhead production occurs in the Arroyo Seco River;
- Abundance and/or production of steelhead in the Nacimiento River is very low;
- Steelhead can persist in the mainstems of the Nacimiento and Arroyo Seco throughout the summer in most years;

- Timing of adult upstream migration is highly variable;
- Adult migration coincides with or occurs after periods of increased flow;
- Steelhead appear to move into the Salinas Lagoon opportunistically; and
- In general, juvenile steelhead outmigration peaks as a result of precipitation events that result in increased discharge.

Re-initiation of the Biological Opinion allows for updating a monitoring plan that was developed in 2005, based on lessons learned since the plan was implemented in 2010.

#### INCREASED STEELHEAD PASSAGE DAYS:

NMFS has advised MCWRA that the number of passage days for steelhead that have been counted as prescribed in the Flow Prescription are inadequate and not meeting their required goals.

The “Supplement to the Biological Assessment for the Salinas Valley Water Project, Salinas River, California”, (p. 31) states that “MCWRA will not engineer flows to meet specific targets in dry or wet years because it was agreed that little or no passage has historically occurred during dry years and that wet years by their nature, provide an adequate number of adult upstream passage days.” The Biological Opinion states that: “The SVWP should have minimal effect on adult passage during dry and wet years”.

The Flow Prescription states that on a 10-year average, the number of upstream passage days for the hydrologic year type should meet the targets indicated in Attachment 1 - Table 1, within a 10% variance. This will be accomplished by natural flows in the Salinas River system and augmentation of natural flows with releases from Nacimiento and/or San Antonio when certain triggers are met. These triggers and operational actions are illustrated in Attachment 2 (Adult Upstream Migration Action Flow Chart), Attachment 3 (Smolt Outmigration Block Flow Action Flow Chart) and Attachment 4 (Juvenile Downstream Passage Action Flow Chart).

The SVWP Annual Flow Monitoring Report - Operational Season 2017, dated October 2018 includes the following information:

#### *ADULT STEELHEAD UPSTREAM PASSAGE ACHIEVEMENT*

*In order to ensure adequate adult steelhead upstream migration opportunities, the Agency will provide, within a 10 percent variance and averaged over a 10-year period, the cumulative number of annual adult upstream passage days in the lower Salinas River as occurred historically. During normal year types, passage days may be achieved by natural flows or augmentation of natural flows with releases from Nacimiento and/or San Antonio Reservoirs. Little or no adult upstream passage occurred historically in dry years, and wet years, by their nature, provide adequate passage opportunities. Table 2 contains the year type and the number of passage days achieved in each operational year. Table 3 summarized passage days by year type. (see Attachment 1 - Table 2, Attachment 1 - Table 3)*

The Flow Prescription was developed utilizing “Salinas Valley Integrated Groundwater and Surface water Model (SVIGSM) Version 6.2”. The SVIGSM provided a representation of groundwater-flow conditions and stream flows in the Salinas River, Arroyo Seco and other tributaries, and the interaction between the surface water and groundwater in the lower Salinas Valley Basin. Unfortunately, the SVIGSM is no longer the best tool for modeling flows in the Salinas Basin. A new model is currently being developed and is scheduled to be operational in 2019.

MCWRA staff has spent numerous hours in this re-initiation process analyzing data to identify opportunities to

increase passage days within the bounds of the Flow Prescription without the use of these robust modeling tools. The data analyzed, and additional reference material is available for downloading on MCWRA's website at:

<http://www.co.monterey.ca.us/government/government-links/water-resources-agency/home/reinitiation-of-nmfs-biological-opinion>

For example, MCWRA staff analyzed an objective of achieving 100 cfs of flow at Spreckels for 15 consecutive days during the third winter following two consecutive dry years and learned that such action would result in potentially significant impacts to the SVWP. The result of this work was presented to the Agency's Board of Directors at their November 19, 2018 meeting.

Based on this analysis and the review of the extensive work that was conducted between 2003 and 2007 to establish the well-defined passage event triggers for reservoir releases related to adult steelhead upstream migration and smolt outmigration, MCWRA staff contends that the Flow Prescription is working as it was intended and any major changes or additions will require a similar, robust analysis utilizing updated tools and current information. MCWRA staff believes this analysis is better suited in the development of the HCP.

MCWRA staff are preparing to present recommendations to its Board of Directors on January 22, 2019, regarding how to move forward with NMFS in the re-initiation process. Ideas and feedback shared at the January 11, 2019 workshop will inform those recommendations.

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Attachments:

1. Tables 1, 2, 3
2. Adult Upstream Migration Action Flow Chart
3. Smolt Outmigration Block Flow Action Flow Chart
4. Juvenile Downstream Passage Action Flow Chart