

SAN JOAQUIN RIVER RESTORATION PROGRAM PROGRAM UPDATE

FALL 2016



The San Joaquin River Restoration Program (SJRRP) is a comprehensive long-term effort to restore flows to the San Joaquin River from Friant Dam to the confluence of the Merced River and restore a self-sustaining Chinook salmon fishery in the river while reducing or avoiding adverse water supply impacts from restoration flows.

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Cover Photo: View of Restoration Flows entering Reach 4A of the San Joaquin River below Sack Dam. See story this page for more details.

RESTORATION FLOWS RESUME IN 2016

The Restoration Flows recommenced on February 15, 2016 after more than two years of zero allocation. The releases from Friant Dam are due to a San Joaquin Watershed snowpack that was the highest since 2013, resulting in a Normal-Dry water year declaration. Runoff into Millerton Lake will tally approximately 1.3 million acre-feet, with 263,295 acre-feet of this yield allocated as Restoration Flows.

Based on this water supply availability, the Restoration Administrator identified two primary objectives for Restoration Flows:

- Move towards year-round connectivity of the river from Friant Dam to the Merced River confluence.
- Facilitate the testing of techniques for the trapping and transporting of juvenile salmon.

Achieving connectivity for this year to the Merced River confluence required several actions to be completed. They included the purchase of four flowage easements in the Eastside Bypass from private landowners; completing the Fresno Kangaroo Rat surveys within Reach 4A and a portion of the Eastside Bypass; and the completion of the Eastside Bypass Conveyance Project (see story on Page 2). Completion of these efforts enabled the release of Restoration Flows past Sack Dam on Aug. 17.

Consistent with the Restoration Administrator's recommendations, the releases from Friant Dam included meeting Holding Contract requirements in Reach 1 and were set to a target of 80 cubic feet per second (cfs) past Gravelly Ford through Spring. During this period, Reclamation scheduled several pulse flows to cue downstream migration of juvenile fall-run Chinook salmon to downstream fish collection weirs. Collectively, these flows completed their wet-up of a dry Reach 2A and B, and reached Mendota Pool in July. The August releases from Sack Dam were initially set at 40 cfs, with higher flows expected later this year. The connection of continuous Restoration Flows at the Merced River confluence occurred on October 17th.

EASTSIDE BYPASS CONVEYANCE PROJECT COMPLETED

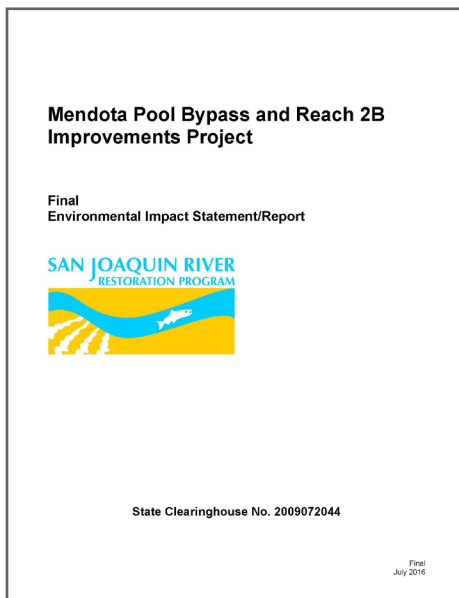
The first construction project by Reclamation as part of the SJRRP was completed this past summer at the Eastside Bypass near the town of El Nido. More than 52,000 cubic yards of accumulated sediments were removed to restore flow capacity in the Eastside Bypass and allowed for passage of Restoration Flows and migration of reintroduced salmonids. The project site is located approximately 19 miles southwest of the city of Merced, in the vicinity of El Nido Road and the southern extent of the Merced National Wildlife Refuge. As part of the project, Reclamation constructed a low-flow channel, and removed inoperative culverts and a low-flow river crossing that were contributing to upstream backwatering of the river and bypass.



2016 RECAPTURE AND RECIRCULATION OF RESTORATION FLOWS

In 2016, the recapture and recirculation of restoration flows to the Friant Contractors is anticipated to occur at three locations: Mendota Pool, lower San Joaquin River and in the Delta. As in prior years, Restoration Flows reaching Mendota Pool this summer were recaptured. The connectivity of the San Joaquin River to the Merced River confluence this year provides Reclamation its first opportunity to recapture Restoration Flows downstream of the project area. In July, Reclamation completed an Environmental Assessment and a Finding of No Significant Impact to temporarily recapture Restoration Flows at existing

facilities owned by Banta Carbona and Patterson Irrigation Districts. Reclamation is also working on a plan to recapture Restoration Flows at Central Valley Project facilities in the Delta. From these recapture points, Restoration Flows will be recirculated to Friant Division contractors to reduce water supply impacts from releases consistent with Paragraph 16 (a) of the Settlement.



MENDOTA POOL BYPASS AND REACH 2B PROJECT UPDATE

The Mendota Pool Bypass and Reach 2B Project implements Paragraphs 11(a)1 and 11(a)2 of the Stipulation of Settlement of NRDC vs. Rodgers, and consists of a floodplain width which conveys at least 4,500 cubic feet per second (cfs), a method to bypass Restoration Flows around Mendota Pool, and a method to deliver water to Mendota Pool.

Reclamation undertook a consensus-based alternative development process to obtain stakeholder input and reach a preferred alternative that minimized impacts to the local community. Alternative B, the Preferred Alternative, improves Project benefits to the fishery and environment and includes levee alignments that have been negotiated with landowners to minimize agricultural impacts. This environmentally preferable alternative balances the needs of the Chinook salmon fishery with local farming concerns.

Reclamation published a Final EIS/R for the Mendota Pool Bypass and Reach 2B Improvements Project on July 8, 2016. Six public comment letters were received. Reclamation anticipates signing a Record of Decision for the Preferred Alternative in fall 2016, and issuing the first construction contract for the project, for construction of the Columbia Canal Intake and Siphon, in 2017.

FRIANT HATCHERY AND CONSERVATION FACILITY WATER SUPPLY LINE

Reclamation completed the Final Environmental Assessment and a Finding of No Significant Impact Statement for the Friant Hatchery and Conservation Facility Water Supply Line in March 2016; the final design specification was completed two months later. Construction is scheduled to begin in November. The purpose of the water supply line project is to increase the available capacity of water sent to the salmon conservation facility downstream of Friant Dam from 35 cfs to 55 cfs. During construction, access to water from the river outlet works on Friant Dam will be shut off. Reclamation intends to begin delivery

of contract supplies through the Friant-Kern Canal penstocks in January 2017. Reclamation and California Department of Fish and Wildlife (CDFW) have committed to working closely together to monitor temperatures and implement agreed upon solutions in the event water from Friant-Kern Canal's penstocks begin to approach 60 degrees during this construction project. Reclamation is required, pursuant to our consultation with National Marine Fisheries Service, to begin implementing these solutions once temperatures coming out of the Friant-Kern Canal penstocks reach 58 degrees.



TULARE IRRIGATION DISTRICT, CORDENIZ GROUNDWATER STORAGE BASIN EXPANSION

Construction on the Cordeniz Groundwater Storage Basin expansion started in November 2015, but experienced some delays due to weather and right-of-way purchases. Construction has resumed and is scheduled for completion spring 2018. In May of this year, Reclamation Deputy Commissioners' David Palumbo and Dionne Thompson, visited the Cordeniz Basin while it was under construction as part of their tour of the Central Valley Project. The final project is estimated to cost \$3.9 million with a Reclamation cost share of \$1.95 million. The project will expand an existing 20 acre basin to 80 acres, and result in an estimated Recovered Water Account reduction of 1,500 acre feet per year.

2015 ADULT TRAP AND HAUL UPDATE

Reclamation and the CDFW experienced their greatest capture success of adult fall-run Chinook salmon in 2015 as compared to the previous three years of trapping for the Program's Adult Trap and Haul Study. While river conditions are improving, several in-river obstacles prevent upstream migration and salmon must be provided assistance to circumvent these barriers.

Fall-run Chinook salmon passing Hills Ferry Barrier near the confluence of the San Joaquin and Merced Rivers were captured and transported to a portion of Reach 1A near Fresno to study behavior and spawning site preference prior to reintroduction. Adult salmon were captured using fyke nets in the main stem of the San Joaquin River, Mud and Salt Slough, and near the confluence of the San Joaquin River confluence and Eastside Bypass, and using dip nets at the terminal end of the irrigation canals and drainages.

A portion of female salmon were intragastrically implanted with acoustic transmitters to facilitate post-release tracking and monitoring. Post-release monitoring efforts included evaluations of environmental effects (i.e., temperature and flow) and temporal variation in preferred spawning areas and salmon movements/distribution. From 2012-2015, the Reclamation and CDFW captured and truck transported 119, 367,510, and 933 adult fall-run Chinook salmon, respectively. The peak capture over in 2013, 14, and 15 was generally consistent and near the first week of December.



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2015 SJRRP Water Education Foundation Tour: SJRRP Program Manager Ali Forsythe, left, and San Luis Canal Company General Manager Chase Hurley (next left) lead a discussion on potential restoration effects on Reach 4B1, a river section that has not received any river flows for several decades.

EVENTS & MEETINGS

NOVEMBER 2-3, 2016

**WATER EDUCATION FOUNDATION'S
SAN JOAQUIN RIVER RESTORATION TOUR**



**WATER EDUCATION
FOUNDATION**

2016 SCIENCE MEETING

The SJRRP hosted its second Science Meeting on August 17-19, 2016 in Fresno, Calif. More than 100 people attended the meeting and associated poster session. This year, topics included spring-run Chinook salmon reintroduction; spawning and incubation habitat; physical processes affecting river restoration; juvenile production and survival; and multi-benefit projects on floodplains.

FY 2017 ANNUAL WORK PLAN

The SJRRP recently completed its Fiscal Year 2017 Annual Work Plan. The Plan identifies the activities from the 2015 Framework for Implementation that the SJRRP expects to accomplish from October 1, 2016 to September 30, 2017. The Plan is available on the SJRRP website at: www.restoresjr.net/documentsreports/program-documents

LANDOWNER COORDINATION

Priority 2 Levee Stability Surveys: The California Department of Water Resources, following receipt of permission by all overlying landowners, has completed a series of geologic borings of the levee crown or levee toe in portions of Reach 4B2 and the Mariposa Bypasses. The surveys follow-on the 2015 investigations and will help define current levee performance during floods and develop SJRRP project alternatives.

Giant Garter Snake Surveys: Reclamation, as part of construction preparation for the Reach 2B project, conducted extensive trapping for the Giant Garter Snake (GGS) at locations in Mendota Pool and Fresno Slough this summer. The trapping included installation of 300 floating traps that were checked daily by consulting environmental biologist Eric Hansen, who launched a kayak from a Fresno County parcel with landowner permission. No GGS were captured during the study.

Photo captions: Page 2 - removal of accumulated sediment in the Eastside Bypass (top), cover of "The Mendota Pool Bypass and Reach 2B Project" (bottom left); Page 3 - initial earth movement for the TID Groundwater project (left), releasing salmon back into river (right)

FOR MORE INFORMATION

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