

SAN JOAQUIN RIVER RESTORATION PROGRAM PROGRAM UPDATE

SPRING 2017

SAN JOAQUIN RIVER
RESTORATION PROGRAM



10 YEAR ANNIVERSARY

CELEBRATING 10 YEARS
2006-2016

The San Joaquin River Restoration Program (Program) 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 population in the river while reducing and avoiding adverse water supply impacts from Restoration Flows.

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www.restoresjr.net

for all the latest Program news, events and information.

Cover Photo: Winter 2017 flood flows fill the Eastside Bypass.
Photo credit: S. Martarano, USFWS.

MENDOTA POOL BYPASS AND REACH 2B PROJECT STARTS CONSTRUCTION IN FALL 2017

The Bureau of Reclamation (Reclamation) anticipates awarding the first construction contract for the Mendota Pool Bypass and Reach 2B Project in summer 2017. The Columbia Canal Intake and Siphon, a \$13.7 million project, will provide the Columbia Canal Company with a new intake structure and a siphon to divert water from Mendota Pool over the long-term. In the future, the new intake location will be protected by a fish screen to keep endangered fish species out of the water supply infrastructure and protect all agricultural interests that divert from the pool.

The intake and siphon is a Phase 1 task, as agreed to in the Stipulation of Settlement and authorized under P.L. 111-11. The project is one component of the overall \$400 million Mendota Pool Bypass and Reach 2B Project benefitting multiple interests including farmers, cities, recreationalists and the environment. The project, ultimately, will create a new bypass approximately 1-mile long. This will allow Chinook salmon to pass upstream of Mendota Dam and avoid Mendota Pool water supply infrastructure.

This construction project will be located adjacent to Mendota, a city of approximately 11,000 with unemployment of approximately 9-percent. Based on analysis in the Environmental Impact Statement/ Environmental Impact Report for the Mendota Pool Bypass and Reach 2B project, the project is expected to directly create 100 construction jobs near Mendota, in addition to over 140 indirect jobs for the anticipated 10-year construction period.



An auger is used to obtain soil samples on landowner property close to the Bypass/Reach 2B site.

SALMON CONSERVATION AND RESEARCH FACILITY TO RISE IN SPRING 2017

Public funding from voter-approved state bonds Proposition 84 and Proposition 1 will fund construction on the new \$23.7 million Salmon Conservation and Research Facility, or SCARF.

The SCARF, owned and operated by the California Department of Fish and Wildlife (CDFW), will eventually provide 30,000 – 45,000 naturally-reproducing and self-sustaining endangered spring-run Chinook salmon adults to support the Program Restoration Goal. Fish releases from the SCARF will be combined with other restoration actions to, “restore and maintain fish populations in ‘good condition,’ in the mainstem of the San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish” (Paragraph 2, of the Stipulation of Settlement in *NRDC, et al. v. Kirk Rodgers, et. al.*). Less than 3,000 eggs or juveniles will be transferred to the SCARF each year from northern California streams where spring-run Chinook salmon exist. CDFW will raise fish which have the least amount of genetic similarity, thus producing a genetically diverse population of juveniles for release in the San Joaquin River.

SCARF construction will start this spring adjacent to the existing CDFW San Joaquin Hatchery approximately 1-mile downstream

of Friant Dam near the town of Friant in Fresno County. Facilities from the interim SCARF, currently in operation, will be reused for the SCARF. The total project is expected to be completed in 2018.

As part of its contribution to the project, Reclamation is funding the \$1.3 million construction of a new water supply line for the SCARF. The project will replace 350-feet of 24-inch diameter water line with 30-inch diameter water line capable of eventually moving an additional 20 cfs of water (from 35 cfs to 55 cfs) to the existing hatchery and SCARF. Water line completion is expected in spring 2017.



A rendering of the new CDFW Salmon Conservation and Research Facility.

SYCAMORE ISLAND POND ISOLATION PROJECT NEARLY COMPLETE

The California Department of Water Resources (DWR) has completed all major earthwork activities for the Sycamore Island Pond (also referred to as Pit 46e) Isolation Project. The project is a jointly funded effort between Reclamation and the California Wildlife Conservation Board. Planners recognized the project as a great opportunity to achieve closely aligned goals of the Program and San Joaquin River Conservancy (Conservancy) by improving access at the Sycamore Island Recreation Area while enhancing habitat for Chinook salmon. Where deep gravel pits and high terraces have dominated the landscape for many years, newly created floodplain areas now provide “instant” fish habitat on both sides of the San Joaquin River. Construction efforts include building a temporary bridge across the river for DWR to move gravel, sand, and topsoil. The materials were used to create new floodplains, improve berms

to isolate two gravel pit ponds from the river, and build a 250-foot rock structure for flood protection. Isolating the ponds will help salmon by keeping them in the river channel and away from predatory fish habitat in the ponds. The project also meets Program goals by improving access and allowing the Conservancy to more effectively manage their adjacent lands.

DWR has managed construction of the project since it began in July 2016. The project was on a tight timeline in order to accommodate potential flood flows on the river. This required the majority of the work to be completed quickly and the temporary bridge to be removed before the start of the November flood season. Flood releases have delayed completion of a few last items for the project, including planting the currently submerged floodplains with appropriate vegetation. Final efforts are expected for completion in Winter 2017/18.



PROTECTING AND ENHANCING GROUNDWATER SUPPLIES

The Program Water Management Goal calls for two major components to be developed and implemented: 1) a plan for recirculation, recapture, reuse and exchange or transfer of Restoration Flows; and, 2) a Recovered Water Account (RWA) and program to reduce or avoid impacts to water delivered to Friant Contractors caused by Restoration Flows. The RWA account monitors and records reductions in water deliveries to Friant Contractors as a result of Restoration Flows. To help offset any impacts to Friant Contractors as a result of Restoration Flows and reduce their RWA balances, Part III of the San Joaquin River Restoration Settlement Act authorizes and directs the Secretary to conduct additional Water Management Goal actions. These actions include financial assistance to local agencies within the Central Valley Project to design and construct groundwater recharge and/or banking facilities. Over \$50 million in Program funds is committed to groundwater facilities. To date, the Program has invested heavily in these groundwater projects by committing nearly \$16 million for cost-sharing projects to improve groundwater banking and recharge in the Restoration Area. The ability to capture river flows for the recharge, storage pumping, banking and/or transfer of groundwater creates a more flexible water supply for water users.

PIXLEY AND DELANO-EARLIMART IRRIGATION DISTRICTS GROUNDWATER BANKING PROJECT

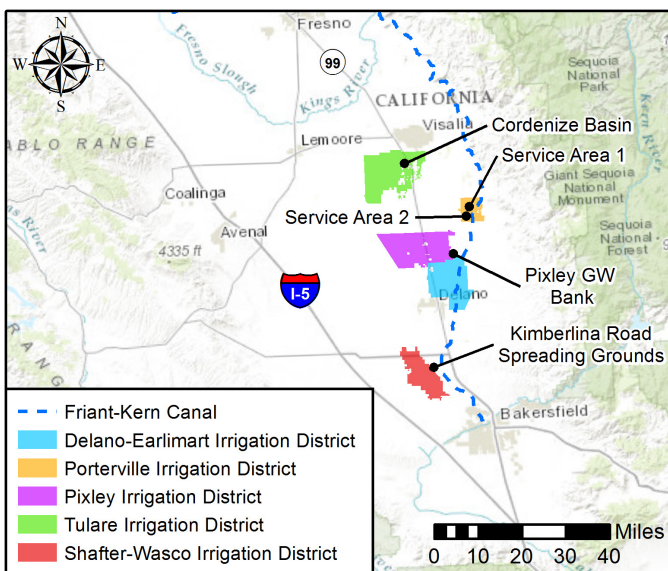
This project will provide a 575-acre basin with the ability recharge groundwater at a rate of 45,000 acre-feet annually from 11 recovery wells. The project will include a new turnout from the Friant-Kern Canal, 4.5 miles of pipeline for the delivery and recovery of water, pumping plants, and associated electrical and control facilities. Using 11 recovery wells, approximately 25,400 acre-feet will be recoverable from the bank annually. The Program will pay \$7.5 million of the \$17.4 estimated project total. Long-term RWA reduction is estimated at 97,218 acre-feet.

KIMBERLINA ROAD GROUNDWATER RECHARGE AND BANKING PROJECT

As a result of increased groundwater pumping, water users in the Shafter-Wasco Irrigation District have seen a decline in groundwater levels and an increase in energy consumption due to deeper pumping. The Kimberlina Road Groundwater Recharge and Banking Project allows the District to capture, recharge and store surface water supplies underground, when hydrologic conditions permit, and withdraw groundwater when needed. The project is now operational and banking water. The project is 40 percent funded by Reclamation (\$5 million of \$12.1 million total) and will involve spreading basins within the District service area that can receive deliveries from the Friant-Kern Canal and the Calloway Canal. Three new wells adjacent to the spreading basin will allow for recovery of the banked water. The project will help to alleviate impacts from reduced available surface water flows and increased groundwater pumping. Long-term RWA reduction is estimated at 153,000 acre-feet.

TULARE IRRIGATION DISTRICT CORDENIZ GROUNDWATER RECHARGE BASIN

Currently under construction at a cost of \$1.95 million to the Program (\$3.9 million total), the Cordeniz Groundwater Recharge Basin project will expand an existing 20-acre spreading basin to 80 acres and serve as a Conjunctive Exchange Program for the Tulare Irrigation District. The recharge basin will include the creation of two individual basin cells that will be served by Serpa Ditch via a new alignment. As part of the project, a Water Exchange Purchase Fund will be created that will allow TID to purchase and recharge wet year water supplies for return to exchange partners in dry years using the District's Class 1 supplies. Long-term RWA reduction is estimated at 129,000 acre-feet.



PORTERVILLE IRRIGATION DISTRICT IN-LIEU GROUNDWATER PROJECT

New water conveyance facilities will allow the Porterville Irrigation District to supply surface water to 2,120 acres of farmland in two district service areas that do not have infrastructure to receive surface water. The project also will allow the District to capture additional wet-year water supplies and use more of its Friant Division Central Valley Project contract water supply. In Service Area 1, there are 1,400 acres of land that currently do not receive service water from the District. This area would receive water through a new turnout and a 10,000-foot lateral from the Wood Central Ditch. In Area 2, approximately 720 acres of land that currently don't receive surface water would have water delivered through a new turnout and a 5,200-foot lateral off the Poplar Ditch Pipeline. The Program is paying \$1.2 million of the \$2.8 million total cost for the project. Long-term RWA reduction is estimated at 26,933 acre-feet.

SAN JOAQUIN RIVER RESTORATION PROGRAM



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Katrina Harrison, project manager for the Mendota Pool Bypass and Reach 2B Channel Improvements Project, provides an overview of the project's construction phases during the 2016 Water Education Foundation tour focused on the SJRRP.

EVENTS & MEETINGS

NOVEMBER 1-2, 2017

2017 WATER EDUCATION FOUNDATION SAN JOAQUIN RIVER RESTORATION PROGRAM TOUR



**WATER EDUCATION
FOUNDATION**

MADERA CANAL LOW-FLOW VALVE INSTALLATION THIS SUMMER

The Madera Canal low-flow valve is a critical component of the Madera Canal Capacity Restoration Project. This valve will allow lower volume releases into the canal than are currently capable with the existing valve. The total cost of project construction is estimated at \$1.8 million. Fabrication, currently underway, is expected to take 3 to 4 months. Delivery of the new valve is anticipated in July and installation starts in late July or early August 2017.

The Madera Canal is integral to the San Joaquin River water system and carries water 36 miles northwest from Millerton Lake to the Chowchilla River. Here, the water is used primarily by two Friant long-term contractors: Madera Irrigation District and the Chowchilla Water District. Unfortunately, over time, the canal has experienced a decreased conveyance capacity as a result of increased roughness, seepage and changes in geometry from bank erosion and/or accumulation of sediment and large debris.

As part of the Program's Water Management Goal, the Madera Canal Capacity Restoration Project will help to reduce or avoid adverse water

supply impacts to Friant contractors. This will be accomplished by enhancing the canal's operating capacity through increased water supply reliability and operational flexibility to meet user demands. The project also has a benefit of reducing reliance on groundwater supplies. The federal contribution to the Madera Canal Capacity Restoration Project is estimated to be \$10 million.



The Madera Canal, pictured here, will have improved operations and reliability as a result of the new low-flow valve.

FOR MORE INFORMATION

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