



## Collaboration and Ridgetop to River Mouth Water Management

### The Sacramento River

April 20, 2021

The Sacramento River Settlement Contractors (Settlement Contractors) are working closely with federal and state agencies, as well as conservation partners, to continually improve their operations and serve water for [multiple benefits](#), including water for cities and rural communities, farms, birds, fish, and recreation.

With the dry year before us, it is important to see the context in which the Settlement Contractors are working and the comprehensive approach that is underway on the Sacramento River to more effectively serve multiple-benefits, both now and into the future. The Settlement Contractors have taken various actions since 2014-15 to prepare for dry years such as this year, including a focus on improving every salmon life-stage as described in more detail below. The attached blog by Fritz Durst and Brent Hasteley describes these efforts: [Water Resources Managers in the Sacramento Valley are Preparing for a Dry Year](#).

The Sacramento River is the longest river in California, stretching 400 miles from the Cascade and northern Sierra Nevada to the Delta. The river is the dynamic lifeline supporting the Sacramento Valley's mosaic of beautiful, picturesque farmland, world-class wildlife reserves and thriving communities, which are interwoven with surrounding tributary streams.

Parties along the Sacramento River have a proven legacy of successfully working with diverse parties to implement innovative conservation actions that will substantially contribute to restoring salmon runs and other avian and terrestrial species to viable populations over the next several decades. Ridgetop to river mouth water management can best be envisioned on the Sacramento River by examining three different stretches of the river, the actions both underway and proposed on these river segments, and the support needed to advance these actions. These efforts are all nature-based solutions and will be integrated through Voluntary Agreements, which we encourage state and federal agencies to embrace as described below. These actions embody ridgetop to river mouth, multi-benefit, water management, and are described below for the different parts of the river system.

**I. Upper River.** Winter-run Chinook salmon spawn, incubate and rear in the upper Sacramento River below Shasta Dam. The Settlement Contractors actively engage with the Bureau of Reclamation, the federal fish agencies and relevant state agencies in support of water temperature management in tandem with habitat improvements for the benefit of spawning and rearing salmon. These actions include:

- **Sacramento River Science Partnership.** This science charter between federal and state agencies (NOAA, USFWS, BOR, DWR, CDFW, SRSC) will guide collaborative science in the upper river. This collaborative is described in more detail in a blog by Thad Bettner: [A New Way Forward for our Environment and Water Management in the Upper Sacramento River](#).
- **Sacramento River Temperature Task Group.** The Settlement Contractors have been added to this working group and have been active participants to address water temperature management as a part of serving water for multiple benefits.
- **Safe Spawning and Early Life Stages for Salmon.** Various Settlement Contractors have replaced spawning gravels and restored side-channels to provide better spawning habitat at key locations and they have placed rootwad structures in the river to protect the baby salmon emerging from their eggs from predators such as trout. This is described in more detail in [Aiding Salmon in the Upper Sacramento River](#).
- **Dry Year Actions Under NMFS BiOp.** Reclamation’s Final Proposed Action for the 2019 NMFS Biological Opinion for Long-Term Operation of the CVP and SWP (2019 NMFS BiOp) includes a section describing Drought and Dry Year Actions that Reclamation, NMFS, the Settlement Contractors and other parties will undertake related to the operation of Shasta Reservoir during critical hydrologic year types. The Settlement Contractors approved “A Resolution Regarding Salmon Recovery Projects in the Sacramento River Watershed, Actions Related to Shasta Reservoir Annual Operations, and Engagement in the Ongoing Collaborative Sacramento River Science Partnership Effort” that is part of Reclamation’s Final Proposed Action. Pursuant to the resolution, during certain dry water year scenarios, the Settlement Contractors “meet and confer” with Reclamation, NMFS and other agencies as appropriate to determine if there is any role for the Settlement Contractors in connection with Reclamation’s operational decision-making for Shasta Reservoir annual operations in those years. The types of actions that are considered include, but are not necessarily limited to: (1) the scheduling of spring diversions by the Settlement Contractors; (2) voluntary, compensated water transfers by the Settlement Contractors subject to Reclamation approval; and (3) delayed Settlement Contractor diversions for rice straw decomposition during the fall months.

**II. Middle River.** This stretch of the river serves as the migratory corridor for winter, spring and fall run salmon on their journey to the ocean and on their return to the upper river. Many of the Settlement Contractors divert water for farms and four National Wildlife Refuges on this stretch of the river. Actions on this part of the river include:

- **Migratory Corridor for Fish.** The Settlement Contractors pursue federal funding under CVPIA to complete the major [fish screen program](#) on the Sacramento River, including the two remaining projects involving Settlement Contractors: Meridian and Natomas Mutual. These projects will complete the major fish screen program and provide operational flexibility for this stretch of the Sacramento River.
- **Bird and Pacific Flyway Improvements.** Settlement Contractors divert water for four National Wildlife Refuges, the ricelands and other managed wetlands that serve as the critical feeding grounds for birds in their migration along the Pacific Flyway and other terrestrial species. Maximizing diversions is important for all these elements of the Pacific Flyway, as well as

providing incentives for winter flooding activities for birds and fish. We support additional funding described in [Central Valley Refuge Needs](#).

**III. Lower River.** Leading scientists at the University of California, Davis and throughout the world are pointing towards the value and importance of re-activating historic floodplains as the key element to improve conditions for fish and wildlife in a managed water system like the Sacramento River. (See [Floodplains: Processes and Management for Ecosystem Services](#)). This reactivation brings our ecosystems to life through the interaction of water, sun and land to provide nourishment and safe-rearing habitat for salmon, birds and many other species. The lower Sacramento Valley is fertile ground for this new path, which can be advanced by reconnecting the floodplain with the Sacramento River to mimic the natural environment. This can be done in a way where farming, birds and fish can all exist in harmony. The Settlement Contractors support and are working with the [Floodplain Forward Coalition](#) to actively pursue re-activating the floodplain. The vision for this program is described below, as well as the actions we are advancing on both sides of the levees—the bypasses and farmlands.

- **Vision.** The holistic vision for floodplain reactivation is described in Lewis Bair’s blog: [Too Big to Dream? A Landscape Scale Approach to Re-envision our Floodplains in the Sacramento Valley for Multiple Benefits](#). The opportunities to reactivate the floodplains on both the wet and dry sides can be seen [here](#).
- **Bypasses (Wet-Side of Levee).** For more details, see [Bypasses and Fish Habitat](#).
- **Farm Fields (Dry-Side of Levee).** For more details, see [Fish Food on Floodplain Farm Fields](#) and the blog by Roger Cornwell and Jacob Katz: [Fish Food Grown on Winter Rice Fields Could be Key to Recovering Imperiled Central Valley Salmon](#).

To see the floodplain reactivation in action, we encourage you to watch the films: [The New Way Forward](#), [No Going Back](#) and [Sharing Butte Creek](#)

**IV. Voluntary Agreements (VAs).** Public Water Agencies (PWAs) throughout California, including the Settlement Contractors, have advanced a “Collaborative Framework for the Voluntary Agreement Program to Update and Implement the Bay-Delta Water Quality Control Plan” that builds upon the February 4, 2020 “Framework for Voluntary Agreements” presented by the State of California team. This is a robust program that can be immediately implemented for the benefit of fish, wildlife, farms and cities. As described in the [Roadmap for Achieving Voluntary Agreements](#), we encourage state and federal agencies to embrace Voluntary Agreements (VAs), help fund the program and provide a mechanism for Settlement Contractors and other CVP contractors to provide water supplier contributions for the program. The VAs are central to a successful [Water Resilience Portfolio](#) in California and the VAs are the cornerstone for local and regional agencies to continue ridgetop to river mouth water investment and management as described above; as well as resolving conflict by bringing the federal and state agencies together to solve California’s water challenges.

- **Ridgetop to River Mouth Water Management.** In the Sacramento River Basin, the VAs will enable the various parties to advance headwaters and forest health management, floodplain reactivation for public safety and fish and wildlife, sustainable groundwater management (including groundwater recharge and banking), and Sites Reservoir. These opportunities are

central to the Water Resilience Portfolio and embody Governor Newsom’s Executive Order for nature-based solutions that “advance multi-benefit, voluntary and cooperative approaches that protect and restore biodiversity while stewarding natural and working lands, building climate resilience, and supporting economic sustainability.” This is described in more detail in the North State Water Alliance’s [How Water Management Investments Improve the Environment in Northern California](#).

- **Resolution of Litigation and Regulatory Challenges.** There is currently a quagmire of litigation surrounding the Biological Opinions (BiOps), Incidental Take Permit (ITP), and Federal Energy Regulatory Commission (FERC) re-licensing, which are affecting water agencies and their customers’ water reliability and costs. The VAs are a mechanism to help resolve these disputes in a coordinated way that ensures adequate measures for fish and wildlife, while providing the regulatory stability necessary to advance water management for all beneficial purposes.

**V. Water Management Investment Priorities.** NCWA and the Settlement Contractors encourage the state and federal administrations to support significant investments in multi-benefit water infrastructure projects to help make our water infrastructure more drought resistant and resilient, while also improving habitat for fish, waterfowl, shorebirds and terrestrial species. With targeted state and federal assistance through programs like those outlined in [Water Management Investment Priorities](#), we can accelerate and expand these efforts to ensure a more reliable water supply that benefits the environment and people.

### **About Us**

*The Sacramento River [Settlement Contractors](#) are various irrigation districts, reclamation districts, mutual water companies, partnerships, corporations, and individuals that serve 450,000 acres of farmland along the Sacramento River and deliver water to four National Wildlife Refuges and other managed wetlands in the Sacramento Valley. Various cities along the Sacramento River (Redding, Woodland, Sacramento) also receive water under settlement contracts. See [sacriveresc.org](#). To learn more about the Settlement Contractors and the Sacramento Valley, we encourage you to read our personal stories at the [Stories you Haven’t Heard](#) and the [Stories you Haven’t Seen](#).*