

Reactivating our Floodplains – A New Way Forward for California

The Sacramento Valley is a rich mosaic of farmlands, cities and rural communities, refuges and managed wetlands, and meandering rivers that support fisheries and wildlife.

Floodplains are the naturally flood-prone areas surrounding a river. Nearly all of the Sacramento Valley floor is part of the historic floodplain. Before levees and dams were built to protect people from catastrophic floods, this floodplain supported robust fish and wildlife populations.



Today—as we look to the future—farmland (primarily ricelands), wildlife refuges, and the bypasses designed for flood protection can be managed to work together for dynamic conservation and to mimic the historic floodplain in the Sacramento Valley, while continuing to provide critical flood protection for Sacramento and other parts of the Valley. Spreading water out and slowing it down over this mosaic of farmlands, refuges, bypasses and managed wetlands mimics natural flows and provides multiple benefits by reactivating the historic floodplain—with people, fish, birds and wildlife co-existing in harmony. Reactivating floodplains in this manner provides benefits year-round by allowing farmers to cultivate rice and other crops for humans during the spring and summer, habitat for wild birds, reptiles, and other fauna in the fall, and food for migratory birds and native fish species in the winter.

To improve conditions for fish and wildlife, California can pursue a new way forward that reflects modern science and encourages water resources management that brings our ecosystems to life through the careful interaction of water, sun and land. The Sacramento Valley is fertile ground for this new path, which can be advanced by re-activating the floodplain with our rivers in an innovative and progressive way that:



- Embraces the work of leading **scientists** from the University of California and throughout the world who are pointing towards the value and importance of re-activating floodplains as the key element to improve conditions for fish and wildlife within a managed water system like the Sacramento Valley. See the U.C. Press book: [Floodplains: Processes and Management for Ecosystem Services](#).
- Engages many forward-thinking **landowners** in the Sacramento Valley who are willing to implement, and in many cases are already pursuing, environmental farming practices and wetlands management techniques that reactivate the traditional floodplain on their lands in the Sacramento Valley for multiple benefits. This includes fish growing in fields in the bypasses (i.e., [Nigiri Project](#)); producing food for salmon on farm fields (i.e., [River Garden Farms](#)); the [Delta Smelt food program](#) for the north Delta; and reconnecting oxbows (i.e., [Bullock Bend](#)) to the river channel, all of which involve collaborative efforts between universities, conservation organizations, and the landowners.



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- Improves upon the environmental success story of our generation—**the return of birds and other species along the Pacific Flyway**—which includes the traditional floodplain that has benefitted from active management by landowners and refuge managers partnering with the Central Valley Joint Venture.
- **Learns from the continued success** of Butte Creek salmon recovery in the Sacramento Valley, which has proven for more than two decades the potential for salmon recovery when the floodplain (in this case the Sutter Bypass and Butte Sink) is connected to the creek in a way that allows for nourishment, spawning and safe rearing and migration.
- **Harmonizes the various uses** of water in the region by spreading water out and slowing it down to grow food for people during the spring and summer and for birds and fish during the fall and winter.
- Serves water for **multiple benefits**, building on important policy direction in the recent state budget, Proposition 68 and Proposition 3 (November 2018 ballot).
- Employs **dynamic conservation strategies** designed to create, retain and enhance habitat in temporary and adaptable ways, which will reinforce the value of floodplains and help species persist in a changing world. Developing and deploying dynamic conservation strategies is especially important for migratory species—both birds and salmon. Dynamic conservation strategies will become increasingly important for biodiversity conservation, especially as a means of facilitating adaptation to climate change and its concomitant variability and extremes, such as extended drought.



- Provides an **ecosystem water budget** that serves ecological values in a way that is complementary to other water uses in the region. (See [PPIC Report](#).)
- Utilizes **Regional Conservation Investment Strategies** that encourage voluntary regional planning processes designed to help California's declining and vulnerable species by protecting, creating, restoring, and reconnecting habitat that will contribute to species recovery and adaptation to climate change and resiliency. This includes the Central Valley Habitat Exchange (<http://cvhe.org/>).
- Helps implement **California's Biodiversity Initiative** by "managing and restoring natural and working lands and waterways" within the traditional floodplain.
- **Recharges precious groundwater** consistent with state policy recognizing that "sustainable groundwater management in California depends upon creating more opportunities for robust conjunctive management of surface water and groundwater resources. Climate change will intensify the need to recalibrate and reconcile surface water and groundwater management strategies." (Water Code §10720.1)(g).)

