



FLOODPLAIN

FORWARD

2024



FLOODPLAIN FORWARD COALITION

Who We Are

The Floodplain Forward Coalition is an innovative collaboration between 27 organizations based in conservation, biology, water management, farming, and local government. We have come together to create a more sustainable path forward to support our fish, wildlife, cities, farms, and rural communities. By working together to find the best possible solutions, we can create vibrant landscapes and healthy California river systems for generations to come.



How We Are Reconnecting the Floodplains

When the Sacramento River Basin is not in flood stage, we look to alternative ways to make the most of our water. Instead of having water leave the valley as quickly as possible, we are implementing functional flows which allows water from our rivers to come out onto the refuges, farmlands and bypasses. This ensures the floodplains offer a diverse and critical landscape that support and protect life for a variety of species and their needs. By slowing down the water

and spreading it across the landscape in key times throughout the year, we are able to provide food for fish, habitat for migrating birds, flood protection for our cities and farms while replenishing our groundwater supplies. This will only work on a large scale and with the collaboration of landowners, scientists and public agencies.



Why it Matters

The Sacramento River Basin is fertile ground for developing a new path forward for holistic water management that incorporates best available science and practical know-how of farm and refuge managers to reactivate the floodplain in a way that serves multiple-benefits. Our floodplains offer a place to grow crops – predominantly rice fields – in the spring and summer, while creating desirable habitat in the fall and winter when the fish and birds need it the most.

We are trying to maximize value from every inch of land and every drop of water in the Sacramento River Basin through the Floodplain Forward Coalition.

Through the necessary use of land, funding and permitting, we can create a system that benefits people and aids endangered wildlife species. If provided with adequate resources, we can demonstrate that the Floodplain Forward approach is climate resilient and ensures greater water security for all Californians today and into the future.



Wade Crowfoot

California's Natural Resources Secretary

“We have to figure out how to modernize our water infrastructure and management systems for the new weather whiplash we are experiencing. Expanding floodplains is a really smart flood protection strategy; it protects communities under flood risk but it also allows us to restore our salmon population and create environmental habitat as fish, birds and wildlife are more stressed from climate change. It is a cost effective, smart, proven, multi-beneficial investment in our future.”



Paul Souza

Regional Director

U.S. Fish and Wildlife Service, Pacific Southwest Region

“In this time of climate change, which is fueling extended droughts and catastrophic fire, action is urgently needed to protect fish and wildlife resources and communities. Restoring floodplains through collaboration is a wonderful example of how we accomplish this task.”

Ridgetop to River Mouth

A Functional Sacramento Valley Depends on Healthy Rivers, Landscapes and Communities.

The floodplains are at the epicenter of our *ridgetop to river mouth* approach – a nature-based solution to protect and restore our biodiversity while increasing the reliability of our water supply for cities, farms, fish, wildlife, hydropower production, and recreation.





NORTHERN CALIFORNIA

The Floodplains

Spanning from Chico to the Delta and from the Sierra Nevada to the Coast Ranges, nearly the entire Sacramento River Basin is part of the historic floodplain that provided an abundance of habitat for fish and wildlife.

Construction of levees and dams may have altered the landscape but the Floodplain Forward Coalition is working on innovative ways to reconnect the rivers to the floodplains, while still providing critical flood protection.



Floodplains



Mountain Range



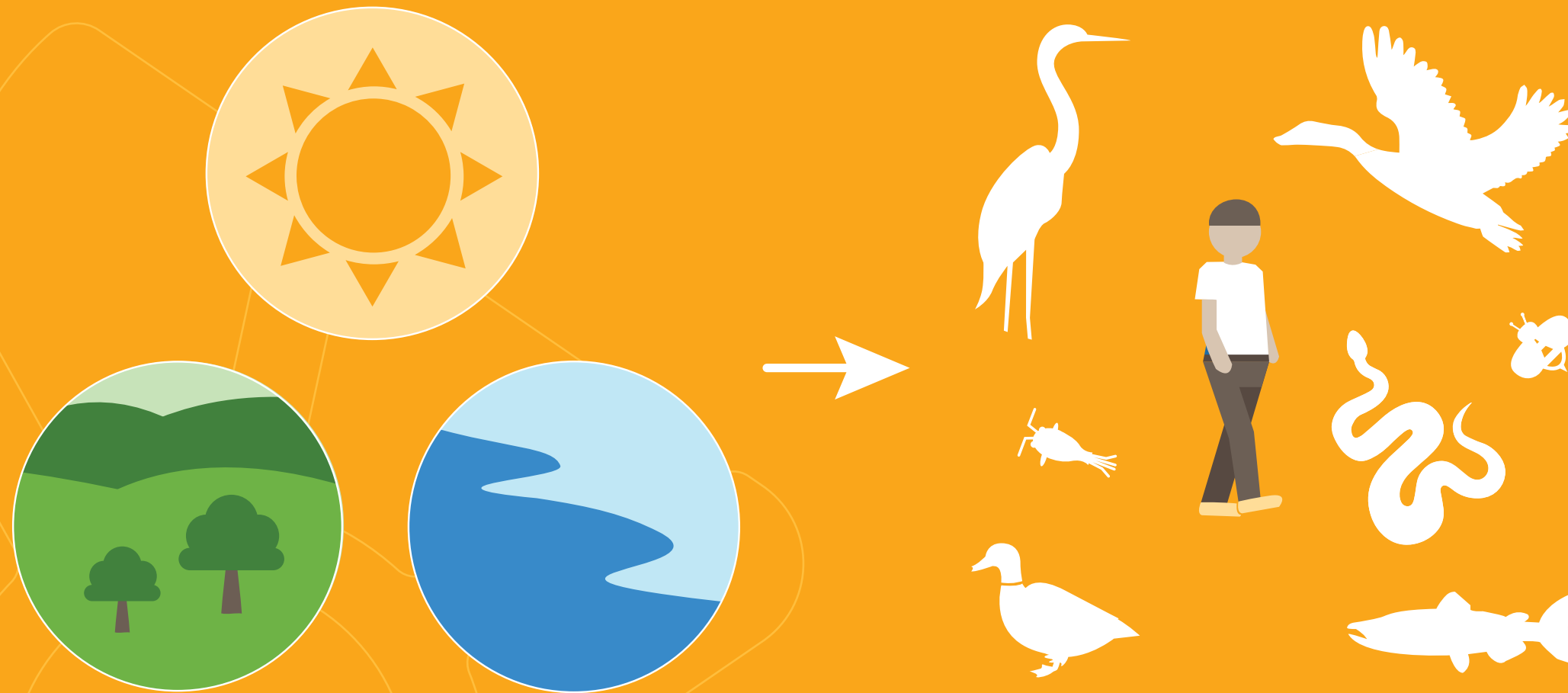
Rivers



An aerial photograph showing a vast agricultural landscape. A central road winds through the scene, with several cars visible. The surrounding fields are partially flooded with muddy water, and some areas appear to be covered in plastic mulch. The sky is overcast. Large, abstract orange and yellow shapes are overlaid on the left side of the image, partially obscuring the text.

REACTIVATING THE FLOODPLAINS IN THE SACRAMENTO RIVER BASIN

Marrying the sun, land & water for a bountiful life.







NORTHERN CALIFORNIA

Fish and Wildlife Habitat on Both Sides of the Levees

With today's knowledge of the landscape and scientific understanding of how wildlife interacts with these historical floodplains, we have improved our water management to mimic natural flows across the lands once seen here centuries ago.

-  **Wet-Side lands** are located within the footprint of the current flood protection system, including the river channels and bypasses. Allows for fish to freely access during wet stages.
-  **Dry-Side farm fields** are located outside the current flood protection system but were once part of the historical floodplain. Fish cannot access this side.



Wet-Side of Levees

Lands within the Flood Protection Footprint

Projects within the river channel (i.e. oxbows) and the flood protection bypasses create seasonal wetland habitat on ricelands located in the bypasses and flood relief areas. By managing the flows, we increase the duration of flood events and give the water residence time necessary to spur robust aquatic food production for fish and wildlife.

Migrating bird species use the flooded bypasses to rest and feed during their journey along the Pacific Flyway. Chinook salmon enter and exit the floodplain fields providing them with high-density food foraging opportunities, refuge from predators, and an unimpeded migration corridor to the San Francisco Bay.

These projects operate in conjunction with enhanced fish passage at various weirs to increase the frequency of floodplain activation and optimize adult fish passage through the bypasses. Inundation of the floodplain occurs during the late fall and winter months allowing for duck hunting and continued farming during the growing season.





Dry-Side of Levees

Lands Protected by the Levees within the Historic Floodplain

When Dry-Side fields are flooded during the fall and winter months to decompose remaining rice straw, they become a haven for a large assortment of waterfowl and shorebirds during key migratory seasons. These ricelands are critical for providing rearing habitat as well as a rich nutrient food source as birds feed on bugs and leftover rice grain. However, fish cannot access these aquatic habitats naturally, which means special water management is implemented on ricelands and other managed wetlands (duck clubs and refuges) to create useful fish habitat.

This is done by holding water on these fields for several weeks during the fall and winter months which in turn produces abundant amounts of zooplankton and invertebrates (fish food). Fields are then periodically drained, transporting the food and water back to the river ecosystem.

These projects have the potential to re-integrate several hundred thousand acres of historical floodplains and provide a critical food source for endangered fish populations.





FOCUSED ON THE FIX

Landowners throughout the Sacramento River Basin are committed to projects that advance floodplain reactivation to improve habitat for fish and wildlife, while maintaining farming and managed wetland operations. The historical floodplain has been divided by levees, yet there are actions that can be taken by landowners and agencies on both sides of the levees that will reactivate the historical floodplain.

Combining these actions mimic natural, shallow, long-duration flood patterns and restores the ecological process that drives healthy and productive aquatic ecosystems.

Together, Wet-Side and Dry-Side water management strategies show tremendous promise for fish and wildlife populations on working lands.



FARMING & CONSERVATION

How leading landowners and conservationists are united in using scientific solutions for fish and wildlife management on our floodplains

Conservation groups are teaming up with landowners throughout the Sacramento River Basin to help boost wildlife populations on working farmlands year-round. Fields, wildlife refuges, and the bypasses that are designed for food protection are being managed to work together for dynamic conservation efforts. Spreading out and

slowing down water across the landscape mimics natural flows and provides multiple 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.





Mary Wells

Land owner in Williams and Maxwell

There were those who said we'd have to choose farms over conservation or vice versa. We've had the opportunity to showcase that we can use our water to grow rice and benefit wildlife the year-round.



Julie Rentner

River Partners

If we can demonstrate strong collaboration and show the results of successful projects, we can enact change across the entire state.



Jacob Katz

California Trout

By integrating a working knowledge of natural process into the management of natural resources like rivers and farm land, we are demonstrating that it is possible to balance the needs of people and wildlife, even in the middle of one of the world's most productive agricultural landscapes.



Fritz Durst

Tule Farms

We can't wait around to see the extinction of native species. We need diverse habitat and farm fields in the valley can now provide the floodplains these birds, fish and insects need to thrive.



Bryce Lundberg

Lundberg Family Farms

By flooding the fields, farmers across the valley are able to recreate a historic wetland habitat. The reemergence of the great Pacific Flyway demonstrates what is possible for all species.



Virginia Getz

Ducks Unlimited

We are heavily reliant on agricultural lands for waterfowl habitat, which means it is more critical than ever that we work in partnership with farmers to ensure a balance for crops and wildlife.



Ann Hayden

Environmental Defense Fund

Figuring out smart ways to create functional habitat on working lands that result in measurable benefits for wildlife is key to developing resilient river systems that also meet human needs for drinking water and irrigation.



- Fish Food
- Waterfowl Habitat
- Fish Screens & Ladders
- Fish Passage Project
- Duck Egg Rescue
- Wildlife Habitat
- Salmon Shelter

Mary Wells



Tule Farms



Gorrill Ranch



Lundberg Family Farms



Erdman Farms



Montna Farms



River Garden Farms



Knaggs Ranch



Conaway Ranch



MAKING HEADLINES

Los Angeles Times

**Editorial:
Restore California's
floodplains to capture
more stormwater,
protect human life**

[Link to Full Article](#)

California needs to restore its floodplains. Not the whole valley floors, and not as they were in the pre-development era. But it needs to have many more acres of land reserved for floodwater.

There are multiple benefits. The first is, of course, protecting life and property, because floodwaters are given a place other than city streets to gather. Beyond that, water that settles over floodplains percolates into the soil and, where the geology permits, recharges groundwater that has been dangerously depleted by agricultural over-pumping.

And restoring floodplains restores seasonal wetlands, which is good for the entire natural web that holds California together — including native plants that are less likely to burn during fire season than invasive species, fish that regain spawning habitat, migratory birds that find nesting areas, mammals that can once again migrate across the valley.

BY THE TIMES EDITORIAL BOARD
MARCH 14, 2023 UPDATED 5:12 PM PT



State must act now to head off future floods

[Link to Full Article](#)

Flood-plain restoration also increases habitat for endangered fish, water birds and even monarch butterflies. It locks up carbon dioxide, which helps fight climate change.



A 'Floating Fillet': Rice Farmers Grow Bugs to Help Restore California's Salmon

[Link to Full Article](#)

Carson Jeffres – an aquatic biologist with UC Davis – and Katz published a study last year that suggests that, when farmers and conservationists work together, there could be more fish in California Rivers. He thinks projects like this could help eliminate the popular farms versus fish argument.

ON THE SILVER SCREEN

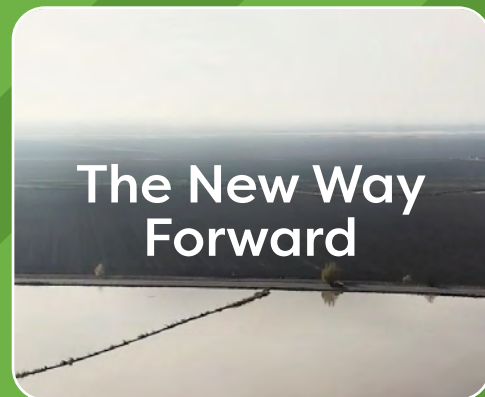
Award-winning films explore how reconnecting our landscape with our vital rivers can have a profound impact on recovery of endangered fish and wildlife.



Soaring over the Floodplains is a virtual tour of the Sacramento River Basin using a 360-degree camera. (5 mins)



Ricelands: Cultivating California's Environmental Crop released in 2023 highlights how farm fields are being optimized for use by birds, fish and people. (15 mins)



The New Way Forward: Wetlands released in 2019 focuses on how successful bird habitat encouraged farmers to also use their fields to grow food for endangered fish. (9 mins)



Acclaimed film-maker Kit Tyler's work, *Sharing Butte Creek*, describes the collaboration that occurred 30 years ago to reconnect the floodplain to Butte Creek to benefit spring-run Chinook. It premiered on KVIE (Sacramento PBS Channel 6) in 2021. (26 mins)



No Going Back in 2016 was the first film to highlight this new way of thinking in the Sacramento Valley. The story showcases a groundbreaking idea to reconnect fish to their historical feeding grounds. (12 mins)



CVJV's film, *Motus Avium - A Mission to Save California's Last Wetlands*, uncovers how landowners, conservation organizations and governmental agencies are working together to create and restore bird habitat. (13 mins)

A Return to Glory

The floodplains are not just a hopeful, unproven idea. They have shown to be vital in the health and wellness of people, fish and wildlife throughout history.

Through the success of ricelands, private lands and refuges working together as critical bird habitat, we have seen the dramatic return of migratory waterfowl along the Pacific Flyway over the last 30 years. Today, those same fields are also home to shore birds, reptiles and even endangered fish. As evident in the photo on the next page, more floodplain fatties may mean we see an increase in Chinook salmon spawning in our rivers once more.

When Spring arrives and the fish and birds continue on their migratory journey, these fields become productive crop lands

that support people as well as provide the economic resources to manage the fields as habitat when wildlife returns.

In places like Butte Creek, this coalition has proven that working together to address key salmon life-cycle stages can lead to a robust return of migrating fish in our streams and rivers.

This is truly a multi-beneficial model that can have profound impact on how we manage water and land in California. We are hopeful that with the necessary land, adequate funding and manageable permitting, we can create a system that benefits people and wildlife the year round. The Floodplain Forward Coalition is focused on the fix and we hope you will join us in solving one of California's biggest issues.

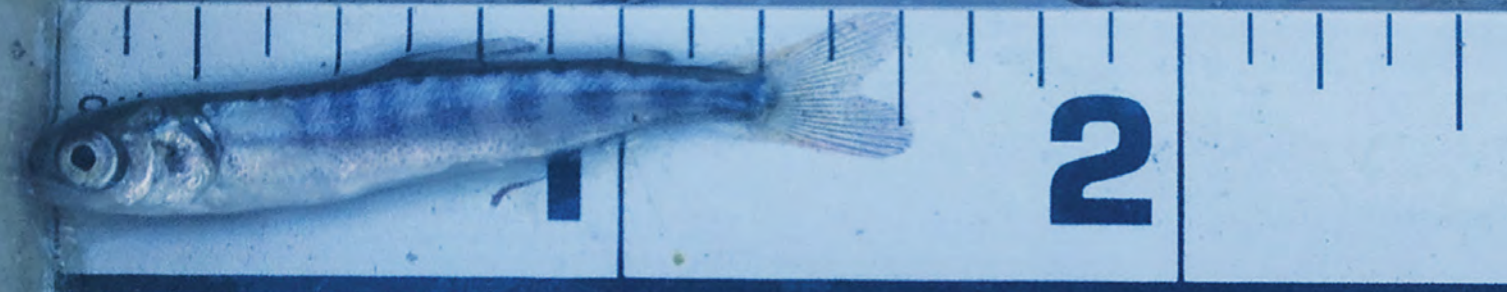
Productive Farmlands



▶ ▶ ▶
NORTHERN CALIFORNIA

MULTIPLE BENEFITS

River Fish



Floodplain Fish



Bird Habitat



Flood Protection and Groundwater Recharge





Collaborative Solutions

Benefiting people, fish and wildlife year-round

The Floodplain Forward Coalition is a unique partnership of 27 organizations in farming, conservation, water management and local government that are making a difference by using land and water to benefit people and wildlife year-round. Our model proves that collaboration between public and private entities can have a positive and profound impact on our environment. Reactivating the historic floodplains happens because we are focusing on the fix, rather than the fight. The trust we are building is the true answer to creating a sustainable way of life for people, fish and wildlife in California.

