



RIVER PARTNERS



Dos Rios Ranch Preserve

HISTORIC FLOODPLAIN RESTORATION

Dos Rios Ranch Preserve

Located at the confluence of the Tuolumne and San Joaquin rivers in the heart of the San Joaquin Valley, Dos Rios Ranch Preserve is the largest public-private floodplain restoration project in California's history. Undertaking nearly a decade of on-the-ground restoration, River Partners transformed the property into a model for cost-effective green infrastructure that produces exponential benefits for wildlife, natural resources, and communities.

PROJECT HIGHLIGHTS

- The largest public-private floodplain restoration in California's history at 1,600 acres along 8 river miles. River Partners plans to restore an additional 500 acres
- Multi-benefit model of restoration supporting imperiled species, flood safety, water conservation, climate resilience, strong local economies, and more
- Chosen to become the newest California State Park in nearly a decade and a half, and a strategic choice for the park-starved San Joaquin Valley
- Restoration led to de-listing of the endangered Aleutian Cackling Goose
- Located adjacent to the approximately 7,000-acre San Joaquin River National Wildlife Refuge (see "Featured Projects"), the two properties create one of the largest contiguous floodplains in the Central Valley

DOS RIOS RANCH THEN AND NOW

Dos Rios Ranch was disconnected from the surrounding rivers by a series of berms built by farmers during the 20th century. River Partners removed these berms in 2018, and today there are roughly 1,000 acres of seasonally flooded lands available for use by local wildlife, including two endangered mammals, five endangered birds, and three endangered fish species. Located across the river from the 7,000-acre San Joaquin River National Wildlife Refuge, restoration at Dos Rios Ranch significantly increases the riparian habitat in the region, adding to two of the most important migratory wildlife corridors in the San Joaquin Valley – the Tuolumne and San Joaquin rivers.



BY THE NUMBERS



VISIONARY FUNDERS

A core group of forward-thinking agencies have invested more than \$40 million in the acquisition and restoration of Dos Rios Ranch, including:

Federal:

- National Fish and Wildlife Foundation
- Natural Resources Conservation Service
- US Bureau of Reclamation
- US Fish and Wildlife Service

State:

- CA Dept. of Fish & Wildlife
- CA Dept. of Water Resources
- CA Natural Resources Agency
- CA State Parks
- CA Wildlife Conservation Board

Local:

- River Partners
- San Francisco Public Utilities Commission
- Stanislaus County Public Works Department
- Tuolumne River Trust

Private:

- Firedoll Foundation
- Mape's Ranch
- New Belgium Brewing
- Pacific Gas & Electric Co.
- Resources Legacy Fund
- Sierra Nevada Brewing
- Volgenau Foundation



(Left) Dos Rios Ranch in 2009 before River Partners began restoration. Prior to River Partners' purchase of the property, it was a dairy and cattle operation that also produced diversified crops such as almonds, tomatoes, grains, and forage mixes. The property was vulnerable to frequent flood events, and between 1983-2007 the ranch flooded six times – about once every 4 years.

(Right) Dos Rios Ranch in 2019 during the area's last major flood. Since planting first began nearly a decade ago, River Partners has restored 1,600 acres of riverside habitat along eight river miles. We've planted over 350,000 native trees and other wildlife-friendly vegetation. In addition to planting new habitat, River Partners removed small levees to reconnect the river to 1,000 acres of floodplain, creating new habitat for both terrestrial and aquatic wildlife, in addition to reducing flood risk for downstream communities.

A LIFELINE FOR MULTIPLE SPECIES

River Partners designed habitat at Dos Rios Ranch to go beyond a single-species focus, actively balancing the needs of the entire ecosystem and using real-life lessons to guide our restoration efforts. The ranch is within the Pacific Flyway, a global migration corridor for birds. It is also one of the last remaining refuges for the riparian brush rabbit, one of California's most endangered mammals.

The site also provides habitat for a broad range of other species, including the riparian woodrat, Swainson's hawk, least Bell's vireo, yellow warbler, sandhill crane, and an entire suite of neo-tropical migratory songbirds. Chinook salmon, steelhead trout, and white sturgeon have been documented spawning near the restoration site. Wildlife monitoring cameras have identified new occurrences of imperiled species inhabiting the property, guiding the placement and configuration of various habitat features. With partner bird-monitoring organizations, we've documented that the diversity of bird populations at Dos Rios Ranch is similar to that of mature forests after just two



Top to bottom: Riparian brush rabbit, least Bell's vireo, Swainson's hawk, juvenile Chinook salmon, and western monarch butterfly. Dos Rios Ranch provides large-scale habitat for these species and many others, including the riparian woodrat, steelhead trout, yellow warbler, sandhill crane, and an entire suite of neo-tropical migratory songbirds.

growing seasons. Our habitat innovations are the subject of several case studies on leading models of effective ecosystem restoration.

To help slow the precipitous decline of western monarch butterflies, we augmented 150 acres at the ranch with more than 12,000 milkweed and other monarch- and pollinator-friendly plants. This work is part of the largest coordinated monarch habitat restoration effort in the western U.S.

BEYOND HABITAT

Dos Rios Ranch provides important habitat for struggling native California wildlife, but its benefits extend far beyond its perimeters. The restored floodplain enhances flood protection for downstream communities by slowing down floodwater and letting it soak into the ground. Dos Rios Ranch's restored floodplains can store up to 10,000 acre-feet of water during flood events which can reduce flooding downstream for approximately 10 miles and provide hours of additional response time for water managers and community members in Manteca and Stockton.

New floodplain forests capture carbon dioxide and other harmful greenhouse gases to boost the state's climate resiliency. In fact, restored ecosystems can store carbon at more than twice the rate of mature forests.

These same forests combat the effects of drought by recharging and purifying groundwater, and increasing freshwater supplies for wildlife, farming, and households.

SUPPORTING A RIVER'S RIGHT TO WATER

Restoring the Dos Rios floodplain will significantly reduce the need for irrigation water during the growing season. By refraining from irrigation, and by allowing floodwater to spread, we estimate approximately 7,000 acre-feet of excess water will be generated annually at the site. Researchers from the Irrigation Training and Research Center at Cal Poly State University are helping us understand how floodwaters are retained in the soils throughout the year.

This groundbreaking science is aiding our petition with the State Water Resources Control Board to dedicate 7,000 acre-feet of our riparian rights to instream beneficial uses pursuant to Water Code Section 1707 as a voluntary Delta outflow. This precedent-setting transfer would be a groundbreaking step in redesigning a system for the San Joaquin River where farms and fish can thrive.

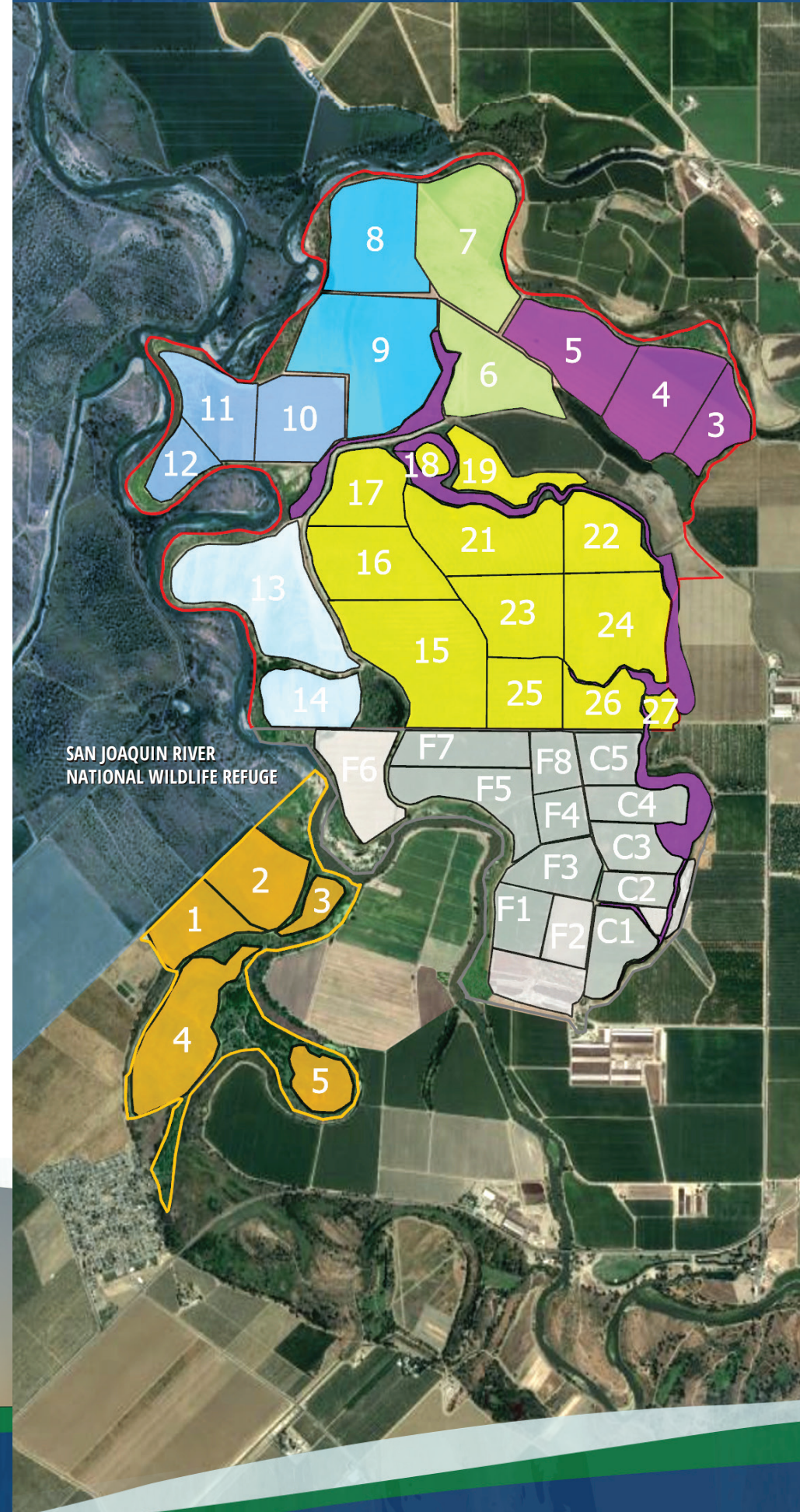


In a first-of-its-kind effort, River Partners is petitioning the State Water Resources Control Board to dedicate the 7,000 acre-feet of retired water each year at Dos Rios Ranch to the Tuolumne and San Joaquin rivers, and the imperiled fish and array of other wildlife that make their homes in and along the critical waterways.

A LONG-AWAITED STATE PARK

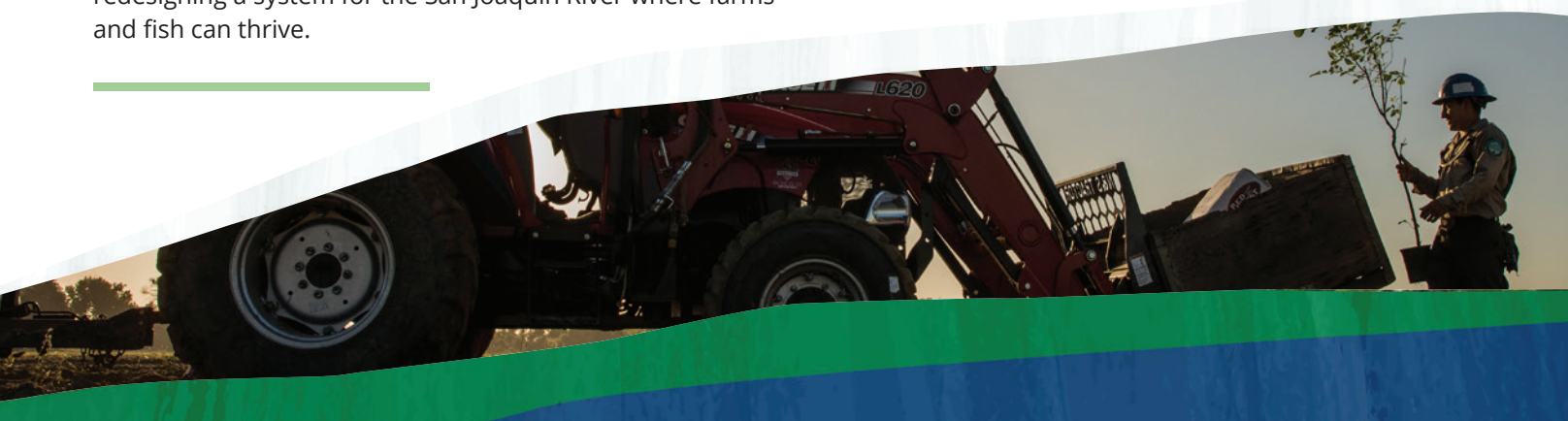
In 2022, California State Parks chose Dos Rios Ranch for potential inclusion in the state parks system. The announcement advances California State Parks' Central Valley Vision, developed in 2006 with the intention of creating parks along Central Valley rivers.

Dos Rios Ranch becoming a state park is exactly what our diverse alliance of public and private partners envisioned over a decade ago as the fitting conclusion to the largest floodplain restoration project in state history. That vision involved transforming the ranch back to its native condition and giving the property back to the public to enjoy in perpetuity. Dos Rios Ranch was acquired and restored using public funds, and the property's potential transition to state ownership strengthens prior investments to support a thriving future for the Central Valley's environment and communities for generations to come.



PROJECT PHASES, FUNDERS & TIMELINES

- DOS RIOS RANCH PRESERVE**
 - Acquisition** – 2012
 - Funders** – USDA/NRCS, USBR, CVPIA, USFWS, NAWCA, SFPUC, CA WCB, CNRA RPP, CA DWR FPCP, Resources Legacy Fund, private funders
 - Acres** – 1,602
 - Restoration**
 - Phase 1 – 2013
 - Acres – 600
 - Funders – USBR, USFWS, CA WCB, USDA/NRCS
 - Phase 2a – 2018
 - Acres – 130
 - Funders – USBR, USDA/NRCS
 - Phase 2b – 2018
 - Acres – 115
 - Funders – USBR, USDA/NRCS
 - Phase 2c – 2018
 - Acres – 170
 - Funders – USFWS, CDFW, USDA/NRCS
 - Phase 3 – 2019
 - Acres – 142
 - Funders – CA DWR
 - Phase 4 – 2020
 - Acres – 239
 - Funders – CDFW
- HIDDEN VALLEY DAIRY**
 - Acquisition** – 2014
 - Funders** – CA DWR, CA WCB
 - Acres** – 497
 - Restoration** – TBD
 - Acres – 387
- GRAYSON RIVERBEND PRESERVE**
 - Acquisition** – 2015
 - Funders** – CA WCB, CDFW
 - Acres** – 285
 - Restoration** – starting 2021
 - Acres – 185
 - Funders – CA DWR



The Transformation of Dos Rios Ranch—2002-2022

Critical acquisition and restoration funding was provided by: (federal) the National Fish and Wildlife Foundation, Natural Resources Conservation Service, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service; (state) CA Dept. of Water Resources, CA Dept. of Fish and Wildlife, CA Natural Resources Agency, CA State Parks, CA Wildlife Conservation Board; (local) River Partners, San Francisco Public Utilities Commission, Stanislaus County Public Works Department, Tuolumne River Trust; (private) the Firedoll Foundation, Mape's Ranch, New Belgium Brewing Company, Pacific Gas and Electric Company, Resources Legacy Fund, Sierra Nevada Brewing Company, and Volgenau Foundation.



2002

TRT, supported by the Resources Legacy Fund and National Fish & Wildlife Foundation, conducts outreach to landowners along the lower Tuolumne River and tours the Lyons family's original Dos Rios Ranch



2003

After discussing various land-protection approaches, the Lyons family partners with TRT in advancing a conservation project



2005

TRT secures initial funding for the Dos Rios Ranch acquisition from the U.S. Bureau of Reclamation to fund planning and due diligence



2013

Habitat restoration begins with phased restoration driven by permitting complexities and availability of public funding



2014

River Partners completes acquisition of 500-acre Hidden Valley Dairy adjacent to ranch. Begins partnership with fisheries agencies to track salmon migration along property as part of San Joaquin River Restoration Program. TRT establishes conservation easement for dairy



2020

New population of endangered riparian brush rabbit identified on property. Deer return, which hadn't been seen in decades



2022

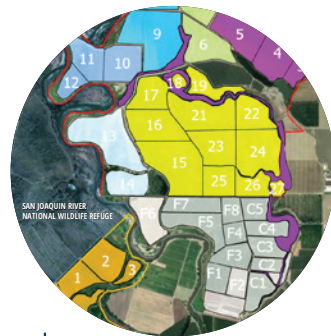
California State Parks chooses Dos Rios Ranch to potentially become California's newest state park in nearly a decade and a half

NEXT STEPS:

- **Transfer** property ownership to California State Parks-2023
- **Remove** rubble to facilitate bank restoration-2022-23
- **Secure** \$5 million and complete restoration of Hidden Valley Dairy-ASAP
- **Collaborate** with Central Valley Flood Protection Board and U.S. Army Corps to breach federal levee on property to expand floodplain by 1,000 acres-next 5 years

2005

TRT leads the Tuolumne River Coalition to complete a guiding vision for the Tuolumne River, *The Lower Tuolumne River Parkway: A Framework for the Future*, with the Dos Rios Ranch as a keystone project



2006

River Partners and TRT complete a conceptual restoration plan, identifying habitat and wildlife recovery goals for the existing ranch

2012

River Partners and TRT complete acquisition of the ranch, with River Partners taking title and TRT taking a conservation easement



2017

Don Pedro Dam exceeds objective release based on Forecast-Informed Reservoir Operations and Dos Rios Ranch floodplains inundated with floodwater for 3 months



2018

Habitat restoration commences on 750 acres of property's primary floodplain

2019

Dos Rios Ranch floodplains inundated again with floodwater for 3 months. TRT and River Partners file 1707 in-stream flow petition to dedicate saved water to instream flows

2021-22

Final phase of restoration begins





San Joaquin River National Wildlife Refuge - Proposed Southern Expansion Area

