

FARM OF THE FUTURE

Working lands for ecosystem services

SACRAMENTO RIVER RANCH | Yolo County, California

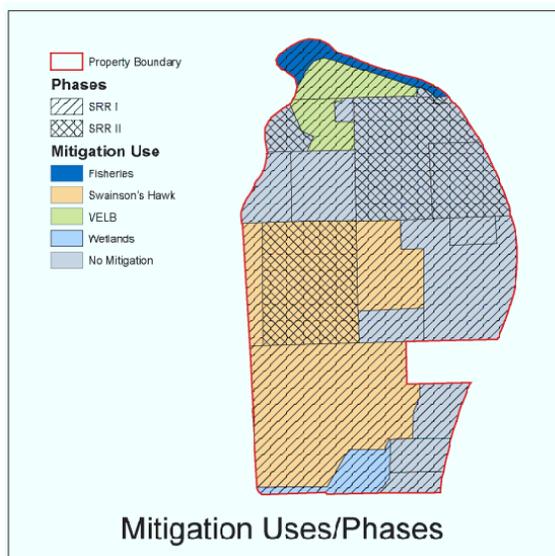
Sacramento River Ranch is a 3,960-acre farm along the Sacramento River in Northern California that supplements traditional revenues from walnuts, wheat, corn, sunflowers, and other crops with environmental mitigation credit sales to buyers in the Sacramento metro area.



Sacramento River Ranch had fallen into poor management and disrepair when it was purchased in 2003 by Wildlands, Inc. and Resource Land Holdings (RLH), its current owners. Wildlands and RLH sought to develop a new model of sustainable farming that would be profitable for the landowner by integrating traditional agricultural income with payments for ecosystem services. Dominic Bruno, farm manager and steward, restored and diversified River Ranch's most productive cropland and converted the remaining marginal land to wetland and wildlife habitat.

For River Ranch, converting lower-margin flood-prone riverfront parcels to high-margin acreage producing environmental credits was a strategy that made sound business sense. The property was uniquely suited for riparian restoration, and development in the Sacramento metro area provided ample demand for mitigation credits as required by Federal and state legislation.

The new ranch. In addition to 1,000 acres of walnuts, 672 acres of organic hay, and over a thousand acres of cropland producing wheat, corn, sunflowers, and alfalfa, River Ranch now provides:



Salmonid habitat (96 acres)

Land adjacent to the river was replanted to river grasses, and ditches were removed to create ideal riparian forest floodplain habitat for salmon during their winter run. Developers and public works projects, which are required to mitigate their impacts, make a one-time purchase of credits at an average of \$100,000 per credit.

Valley Elderberry Longhorn Beetle habitat (234 acres)



Additional riparian land was converted to a species bank for the threatened beetle. Over 9,000 elderberry bushes were planted at the bank site, now protected under permanent easement. Credits are sold to development projects for about \$85,000 per acre.

Swainson's Hawk habitat (838 acres, to be expanded)

Under a California state program, River Ranch was paid to maintain large open fields and grow certain crops in perpetuity to provide foraging habitat for the Swainson's Hawk, which is on the state's threatened species list. In 2010 the farm received a one-time payment of \$7,500 per acre.

Wetland bank (119 acres)

A reclaimed irrigation drainage area was reconstructed to create functional wetland habitat that will be protected under permanent easement. The wetland bank will supply freshwater marsh and riparian habitat credits. Wildlands and Resource Land Holdings anticipate one-time sales of about \$100,000 per acre.

The business side. Participating in environmental markets provides additional farm revenue that is insulated from crop price fluctuations. During the recent dip in the dairy market that affected hay prices, for example, River Ranch experienced high mitigation revenues that offset potential losses.

Mitigation credits are released for sale over a 5-year period, and payments help support farming activities by providing capital for investments in tractors, irrigation systems, and other farm improvements.

Farm Revenue Sources (Gross), Average 2008-2009

Source	Revenue	Customer
 Valley Elderberry Longhorn Beetle credits	40%	Public and private local area developers
 Salmonid habitat credits	7%	Private developers, Army Corps of Engineers
 Swainson's Hawk habitat	6%	Developers for habitat destruction mitigation
 Annual crops and pasture	9%	Various
 Nut orchards	21%	Nut shellers
 Surface water rights	5%	Farmers or cities south of the Delta
 Other (rental income)	12%	Local farmers

Revenue calculations and all financial information provided by the landowner.

LESSONS LEARNED

Regulation drives demand. The Endangered Species Act, the California Endangered Species Act, and the Clean Water Act are critical drivers of demand for mitigation banks in the Sacramento River watershed.

Knowing the market is the first step. Is there an active development sector, public or private, to drive mitigation credit sales, and will development generate sufficient demand within the bank's proposed service area? What's the predicted rate of return for the banking project? Market knowledge is essential to project planning and success.

Upfront capital is required. Creating wetlands, planting riparian habitat, monitoring and verifying activities, clarifying endowment requirements, and marketing credits all require a substantial capital investment.

It takes time and a team. Transforming Sacramento River Ranch into a multi-functional farm with environmental market sales required an expert team of lawyers, mitigation bankers, biologists, engineers, planners, and finance experts. Substantial time was needed for regulatory approval from Federal and state agencies.

Landowners will need assistance. Resource Land Holdings, an agricultural property investment company, and Wildlands, a national mitigation banking company, were able to leverage economies of scale and utilize in-house environmental market capability. Farmer networks and cooperatives, extension agencies, and third-party aggregators may be able to help landowners who have less access to capital and expertise to participate in environmental markets.



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