

SAN JOAQUIN RIVER RIPARIAN HABITAT BELOW FRIANT DAM: PRESERVATION AND RESTORATION¹

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Abstract: Riparian habitat along California's San Joaquin River in the 25 miles between Friant Dam and Freeway 99 occurs on approximately 6 percent of its historic range. It is threatened directly and indirectly by increased urban encroachment such as residential housing, certain recreational uses, sand and gravel extraction, aquiculture, and road construction. The San Joaquin River Committee was formed in 1985 to advocate preservation and restoration of riparian habitat. The Committee works with local school districts to facilitate use of riverbottom riparian forest areas for outdoor environmental education. We recently formed a land trust called the San Joaquin River Parkway and Conservation Trust to preserve land through acquisition in fee and negotiation of conservation easements. Opportunities for increasing riverbottom riparian habitat are presented by lands from which sand and gravel have been extracted.

Study Area

Natural vegetation in the San Joaquin River bottomlands between Friant Dam and Freeway 99 creates a broad corridor of different vegetation communities. The most critical of these vegetative communities is the riparian community which interfaces water, vegetation and wildlife resources, bisecting or bordering on diverse habitat.

Along the 25 miles of the San Joaquin River bottomlands below Friant Dam only about 6 percent of the original riparian habitat may be found (Counties of Madera and Fresno, and City of Fresno 1986). Losses of riparian habitat along the San Joaquin River are attributable to agricultural and urban encroachment, sand and gravel extraction, road construction, snagging, clearing, and ripraping.

In 1986 the California Department of Fish and Game mapped the riparian vegetation corridor along the San Joaquin River for Madera and Fresno Counties, and the City of Fresno as they studied the San Joaquin River-bottom between Friant Dam and Freeway 99 (Counties of Madera and Fresno, and City of Fresno 1986). Figure 1 shows the San Joaquin River riparian vegetation corridor. Table 1 summarizes the results of that mapping by acreage and by category.

Table 1 – Riparian wildlife/vegetation corridor

Category	Corridor Acres	Corridor Percent
Water	1,088	14.0
Trees	588	7.0
Shrubs	400	5.0
Other riparian ¹	1,844	23.0
Sensitive Biotic ²	101	1.5
Agriculture	148	2.0
Recreation	309	4.0
Sand and gravel	606	7.5
Riparian buffer	2,846	36.0
Total	7,900	100.0

¹ Land supporting riparian-type vegetation. In most cases this land has been mined for sand and gravel, and is comprised of gravel ponds.

² Range of a Threatened or Endangered plant or animal species.

The majority of the undisturbed riparian habitat lies between Friant Dam and Highway 41 beyond the city limits of Fresno. Of the 588 acres of riparian woodlands in the San Joaquin River corridor, 264 acres are classified as Great Valley Riparian Forest and lie on and adjacent to the Ball Ranch, approximately 3 miles below Friant Dam (Atlantis Scientific 1987).

Discharges into the San Joaquin River are controlled by the Bureau of Reclamation at Friant Dam. Approximately 95 percent of the average annual runoff of the San Joaquin River is diverted at Friant Dam for export south to Kern County and north to Madera County. The Bureau releases enough water into the river channel to deliver 5 cubic-feet-per-second past the last riparian water right holder at Gravelly Ford, about 37 miles downstream. Since instream flows were reduced in 1954, agriculture, urban uses, and sand and gravel extraction have occurred within the 25- to 100- year floodplain between Highway 41 and Freeway 99.

Below Highway 41 down to Freeway 99 much of the original riparian woodland has been removed for sand and gravel extraction, for golf courses, and for agriculture. The river in many areas has been diverted to flow through gravel ponds. This portion of the riverbottom also contains many older gravel ponds surrounded by woody vegetation comprised of shrubs, willows, and cottonwoods.

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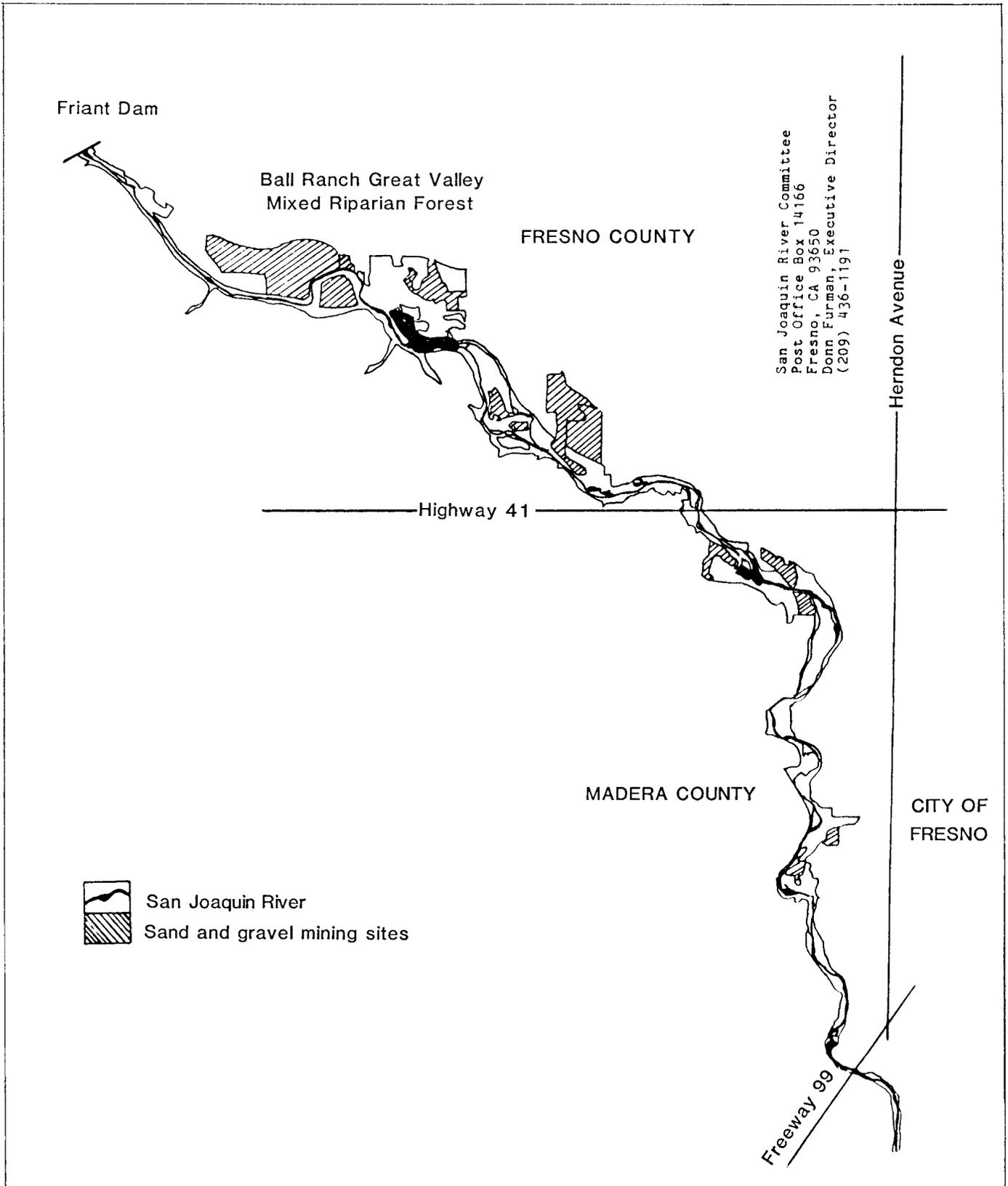


Figure 1- San Joaquin River riparian vegetation corridor. Mapping of San Joaquin River riparian vegetation corridor along the San Joaquin River between Friant Darn and Freeway 99. Prepared by the California Department of Fish and Game for the San Joaquin River Area Reconnaissance Study.

Threats to San Joaquin River Riparian Habitat Between Friant Dam and Freeway 99

San Joaquin River riparian habitat is threatened primarily by urban encroachment into the floodplain. Two proposed residential developments would place approximately 2,300 units on 835 acres within the river corridor. The proposed Ball Ranch residential development called for removing all but 22 of the 264 acres of Great Valley Mixed Riparian Forest in order to regrade the property to elevate housing pads one-foot above the 100-year floodplain.

Residential development directly threatens riverbottom riparian habitat in the San Joaquin River corridor through removal. It also indirectly threatens riparian habitat by increasing the need for future flood control measures such as channelization, clearing, snagging, and riprapping. At the present time the San Joaquin River below Friant Dam is not controlled by levees. Some minor levee work has been done along short stretches to protect sand and gravel processing plants.

Local agencies that exercise jurisdiction along the San Joaquin River corridor between Friant Dam and Freeway 99 include Fresno County, Madera County, and the City of Fresno. The City of Fresno placed a moratorium on residential development in 1986. It is currently considering adoption of riverbottom open space zoning that will preclude permanent residential structures. Land uses permitted under this zoning include agriculture, sand and gravel extraction, compatible commercial such as catfish farms, and public and private recreation including golf courses. The City has proposed policies to protect riparian vegetation.

The Madera County Board of Supervisors has placed a moratorium on residential development of riverbottom lands in its jurisdiction pending development of a specific plan. The current Madera County General Plan designates all areas not subject to intensive development for continued agricultural, grazing, and open space uses (County of Madera).

Fresno County's General Plan calls for open space land uses within their portion of the San Joaquin Riverbottom (County of Fresno 1976). Fresno County's jurisdiction is the largest of the three agencies. It contains most of the remaining undisturbed riparian habitat. The County adopted River Influence Area Policies in 1976, one of the objectives is which to conserve and enhance the natural wildlife habitat.

The Fresno County Board of Supervisors have indicated a willingness to consider amending the General Plan to permit residential housing. To date, no develop-

ment proposal has been presented to the Fresno County Board of Supervisors for a vote.

Another threat to riparian habitat in the San Joaquin Riverbottom is potential recreational development. A 20-acre equestrian park and two golf courses have been proposed along the San Joaquin River within the 100-year floodplain.

Aggregate mining is a significant use of the San Joaquin Riverbottom. 95 percent of the aggregate used in Fresno and Madera Counties comes from the San Joaquin Riverbottom. At the present rate of consumption, the riverbottom aggregate resources can last approximately 25 years. In the past, aggregate mining was both along the channel and in the channel. This practice of mining the riverbed has now ceased.

California's Surface Mining and Reclamation Act of 1975 required that mine operators prepare operational and rehabilitation plans for their sites. Many of the sand and gravel companies operating under old conditional use permits issued by the two counties were not required to preserve riparian vegetation or maintain a riparian buffer. These operations are now in the process of preparing new rehabilitation plans.

Finally, road construction is a threat to riparian habitat. The City of Fresno's northern growth has brought about proposals for new freeway and road construction across the San Joaquin River to link residential areas in Madera County to the City.

Preserving and Restoring Riparian Habitat within the San Joaquin River Corridor

The San Joaquin River Committee whose activities I direct was formed in 1985 to support preservation and restoration of San Joaquin Riverbottom plant and wildlife resources. We are a nonprofit organization with over 800 members incorporated under Section 501(c)(4) of the Internal Revenue Code. We perform public advocacy through grassroots organization and public education.

We work with local and state representatives to support preservation of riverbottom riparian land and continuation of open space land uses. We helped to qualify Proposition 70 which allocates \$5 million for purchase of riparian habitat in the San Joaquin Riverbottom between Freeway 99 and Friant Dam.

The San Joaquin River Committee has facilitated discussions with local school districts about utilization of the San Joaquin for outdoor environmental education.

We have held numerous public meetings to educate the public on issues affecting the riverbottom. We

have covered a wide range of topics from reclamation of gravel ponds for wildlife to San Joaquin River flooding and flood control to public law issues affecting the conservation of open space.

An important part of the San Joaquin River Committee's overall program to educate the general public has been special events that bring people to the river. The most successful of these have been canoe floats where we take hundreds of people on day long floats down the San Joaquin.

The San Joaquin River Committee publishes a quarterly newsletter. The newsletter has proven effective in educating the public on the importance of preserving riverbottom riparian habitat.

While the San Joaquin River Committee has been very effective in "holding the line" on loss of riparian vegetation, the fact that it is primarily an advocacy group has precluded its being able to accept tax-deductible donations of money, land, and easements. We determined that forming a land trust would be beneficial for a longterm program of land preservation.

In March of 1988 we formed the San Joaquin River Parkway and Conservation Trust (the Trust), incorporated consistent with Section 501(c)(3) of the Internal Revenue Code.

Land trusts across the United States are committed by their charters to long-term management of land and land-based resources and to education about natural resources and the need for their stewardship. Land trusts are locally based, largely self-supporting, and run mainly by volunteers. Land trusts purchase and manage land, negotiate conservation easements, contract with public agencies to manage land, and conduct educational programs. They can act quickly and independently to acquire land when it becomes available, a process that can take months for government agencies. Two well-known national organizations that perform land trust functions are The Nature Conservancy and the Trust For Public Land.

Local community leaders who have agreed to serve as initial directors for the Trust reside in both Fresno and Madera Counties. The directors represent a broad range of interests including developers, environmentalists, lawyers, bankers, teachers, sand and gravel mining, businesses, farmers, cattle ranchers, landowners, and community activists.

The Trust has formed advisory committees of local citizens to develop a riverbottom conceptual plan, to develop recommendations on land acquisitions, to research, develop and conduct educational programs, and to fundraise for ongoing activities and specific land projects.

A recent project of the Trust calls for preparation of a conceptual map of a greenbelt-parkway along the San Joaquin River. This conceptual map will map riparian resources, identify sensitive areas for plant and wildlife, and pinpoint critical riverbottom lands for the Trust to acquire.

Two methods of protecting riparian lands are acquisition of land fee simple and acquisition of easements. Conservation easements are an attractive way to accommodate a landowner's desire to preserve land while restricting public uses and the public's interest in preserving a greenway. Easements exist at common law as a partial interest in real property which entitles the owner to some limited use of the property or restricts the landowner's use of the property for the benefit of the easement owner.

Easements are attractive to land trusts because they preserve land without the higher costs of acquisition. Easements are attractive to landowners because they reduce the appraised value of the land while allowing the land to remain the same.

Lands with the least economic value will be the most easily acquired. These lands will include areas prone to flooding—the river corridor itself with its band of riparian habitat—and areas mined for sand and gravel that have little potential for other kinds of development.

An excellent example of such a property is a 286-acre site under consideration for purchase by the Wildlife Conservation Board. This property includes a small island with low woody vegetation, a series of large irregular-shaped gravel ponds with young riparian vegetation, a large marsh, and reclaimed upland that floods in high water.

The efforts of the San Joaquin River Committee and the San Joaquin River Parkway and Conservation Trust have just begun. Hopefully, the lessons learned as we work to preserve and restore riparian habitat along the San Joaquin River will benefit other river corridors in California.

References

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