



Northern Central Valley Office  
500 Main Street  
Chico, CA 95928-5614

tel [530] 897.6370

fax [530] 342.0257

[nature.org](http://nature.org)

July 2, 2003

Dan Ray  
California Bay-Delta Authority  
650 Capitol Mall, 5th floor  
Sacramento CA 95814

Re: Proposal Number 171DA  
Applicant Organization: The Nature Conservancy  
Proposal Title: Sacramento River Restoration: Chico Landing Sub-Reach (RM 178-206)

Dear Mr. Ray:

The Nature Conservancy would like to thank the CALFED Bay-Delta Authority for recommending partial funding of proposal 171DA under the 2002 ERP Directed Action Projects. We would like to offer clarification on points made in the review process by the Selection Panel, the External Science Panel, and the public.

We now recognize that because our proposal focused on multiple properties, our presentation of the Project did not distinguish the individual properties proposed for restoration sufficiently well from one another. In an effort to correct this, we have focused this letter on addressing the relevance of the specific issues of concern raised in the public comments received. The main issues of concern were: 1) the number of properties and total acres under a Williamson Act contract, 2) the number of properties and total acres designated as prime farmland and farmland of statewide importance, and 3) the type of CEQA compliance needed for each property. In closing, we address several more comments that were made in the Selection Panel Review and External Reviews.

### **Response to Property-Specific Concerns**

Our proposal focuses on the restoration of four distinct properties. The main issues raised by the California Department of Conservation (CDC) and the California Department of Food and Agriculture are as follows:

“Much of this acreage is prime farmland, farmland of statewide importance, and farmland of local importance, and is under Williamson Act contract.” (p.3 of the letter from the CDC)

In addition, The California Department of Food and Agriculture (p. 3) also stated:

“The proposal indicates that an EIR will be prepared. The EIR should assess the project impacts on agricultural land conversion as well as any adverse impacts on ongoing agricultural uses on neighboring lands.”

We would like to clarify these points, since the comments indicated some confusion. Table 1 summarizes and clarifies the major issues regarding the Williamson Act, Farmland Mapping and Monitoring Program (FMMP) designations, and environmental documentation needs for each property.

**Table 1.** Properties proposed for restoration in proposal 171DA.

Property Name	Acres to Restore	Owner	Acquisition Funded by	Williamson Act contract?	Prime Farmland <sup>1</sup> ?	NEPA complete?	CEQA required?
Sunset Ranch	25	TNC <sup>2</sup>	private	Yes <sup>2</sup>	No	Yes <sup>5,6</sup>	Yes <sup>7</sup>
RX Ranch	246	TNC <sup>3</sup>	CALFED <sup>4</sup>	No	Yes <sup>8</sup>	N/A	Yes <sup>7</sup>
Capay (Kaiser)	550	USFWS	CALFED <sup>4</sup>	No	Yes <sup>9</sup>	Yes <sup>5,6</sup>	Yes <sup>7</sup>
Dead Man's Reach (Koehnen)	238	USFWS	CALFED <sup>4</sup>	No	No	Yes <sup>5,6</sup>	Yes <sup>7</sup>

<sup>1</sup> FMMP designation as Prime Farmland or Farmland of Statewide Importance. The original proposal indicated there were acres designated as Farmland of Local Importance, this was a mistake on our part. There are no properties with a Farmland of Local Importance designation.

<sup>2</sup> Agricultural land to be transferred to the USFWS by December 31, 2003, at which time, based on the terms of the Williamson Act contract, the contract becomes null and void.

<sup>3</sup> To be transferred to a state agency, most likely CA DFG.

<sup>4</sup> Purchased with funds awarded under a joint contract (97-NO2) to TNC, USFWS, and WCB, with the intent to restore riparian habitat on these properties.

<sup>5</sup> EA and FONSI for acquisition determined and approved March 1989.

<sup>6</sup> EA and FONSI for restoration determined and approved February 2002.

<sup>7</sup> Anticipating CEQA will be required based on state funding. The Lead Agency will likely be the state agency providing the funding. An Initial Study would then be conducted to determine if a Negative Declaration or EIR will be developed.

<sup>8</sup> RX Ranch FMMP designations: Prime Farmland (228.6 acres), Farmland of Statewide Importance (28.7 acres).

<sup>9</sup> Capay FMMP designation: Prime Farmland (170.2 acres), Farmland of Statewide Importance (12.5 acres).

**Sunset Ranch**

Before restoration begins, the property will be transferred to the U.S. Fish and Wildlife Service (USFWS) to be incorporated in the Sacramento River National Wildlife Refuge. The transfer is anticipated to be completed by December 31, 2003. Upon transfer of the property to the USFWS, the Williamson Act contract, based on the terms of the contract, will be null and void. This is a non-discretionary action. This property is not identified as Prime Farmland, Farmland of Statewide Importance, or Farmland of Local Importance. Restoration of Sunset Ranch was included in the Environmental Assessment and Final Finding of No Significant Impact developed by the USFWS in 2002. Currently, there is no state or local action which requires CEQA review. If state funding is awarded, and consequently, CEQA compliance becomes necessary, an Initial Study will be completed to determine if a Negative Declaration or an EIR will be developed.

**RX Ranch**

RX Ranch was purchased in 1997 with funds awarded under a CALFED contract (97-NO2). It is anticipated that the property will be transferred to the California Department of Fish and Game to be included in the Pine Creek Unit of the Sacramento River Wildlife Area. This property is not

subject to a Williamson Act contract. The RX Ranch is classified as Prime Farmland (228.6 acres) and Farmland of Statewide Importance (28.7 acres); there are no acres designated as Farmland of Local Importance. Environmental documentation has not yet been completed for the RX Ranch restoration. It is anticipated that an Initial Study under CEQA will be completed and most likely an EIR will be developed.

#### Capay

The Capay property was purchased by the USFWS with funds awarded under a CALFED contract (97-NO2). This property is not subject to a Williamson Act contract. The Capay property is classified as Prime Farmland (170.2 acres), Farmland of Statewide Importance (12.5 acres) and Farmland of Local Potential (429.6 acres); there are no acres designated as Farmland of Local Importance. Restoration of the Capay property was included in the Environmental Assessment and Final Finding of No Significant Impact developed by the USFWS in 2002. Currently, there is no state or local action which requires CEQA review. If state funding is awarded, and consequently, CEQA compliance becomes necessary, then an Initial Study will be completed to determine whether a Negative Declaration or an EIR will be developed.

#### Dead Man's Reach

The Dead Man's Reach property was purchased by the USFWS funds awarded under a CALFED contract (97-NO2). This property is not subject to a Williamson Act contract. This property is not identified as Prime Farmland, Farmland of Statewide Importance, or Farmland of Local Importance. Restoration of Dead Man's Reach was included in the Environmental Assessment and Final Finding of No Significant Impact developed by the USFWS in 2002. Currently, there is no state or local action which requires CEQA review. If state funding is awarded, and consequently, CEQA compliance becomes necessary, an Initial Study will be completed to determine whether a Negative Declaration or an EIR will be developed.

We request that the Selection Panel reconsider funding the restoration of these four properties (Tasks 1 and 2 of proposal 171DA). Horticultural restoration of these properties (three of which were purchased with CALFED funding for the purposes of habitat restoration) is consistent with the CALFED ROD (August 2000) in that it "Focus[es] habitat restoration efforts on developing new habitat on *public lands* before converting agricultural land" (Sec. 7.1.11).

#### **Response to Section Panel Review**

The Section Panel Review states the following in the third paragraph of the review summary:

"For future proposals addressing full-scale implementation, the Selection Panel urges the applicants to show explicitly how vegetation restoration builds on knowledge gained in previous projects and studies. Rather than continuing to apply standard horticultural techniques to riparian plantings, the applicants are encouraged to find ways to treat full-scale restoration experimentally within an adaptive management framework."

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Our adaptive management framework is outlined in Figures 4 and 5 (p.38-39) of proposal 171DA, and on page 3 we provide the following rationale for considering our project as appropriate for full-scale implementation:

“We are continually refining our restoration planning methodologies by incorporating information from our earlier projects and a variety of other perspectives. While our knowledge of how vegetation communities respond to horticultural restoration efforts is incomplete, there has been sufficient demonstration that these techniques are effective to merit their application to new tracts (Griggs and Peterson 1997, Alpert et al. 1999, Griggs and Golet 2002).”

Further clarification of how we have used adaptive management to advance our restoration techniques follows:

The Nature Conservancy has a long history of adapting and improving its horticultural restoration techniques. Our riparian restoration methodologies were initially developed almost two decades ago at the Kern River preserve. Since 1989, we have refined and tailored these methodologies to the conditions of the Central Valley rivers at the Cosumnes River Preserve, the Dye Creek Preserve, and on the Sacramento River where we have adapted local agricultural practices to the restoration process. The Nature Conservancy contracts with local farmers who have a long history and knowledge of the individual restoration properties and who know how to successfully propagate plants on these sites, this not only ensures highly successful and low cost restoration techniques but also provides economic input into local communities.

Although the learning process that we have pursued has not always been as formalized as that which academics typically prescribe, with strict adherence to experimental design and rigorous hypothesis testing, we nonetheless have learned a tremendous amount by virtue of our unwavering commitment to experiment with new approaches and provide the greatest habitat benefit for each restoration dollar spent.

For example, we have evaluated numerous methods for site preparation (burning, mowing, spraying, disking), vegetation propagation (direct seeding, cuttings, nursery propagation, artificial flooding), planting (direct seeding, planting at depth, adjusting timing, planting in patches and in straight and curved lines), weed control (weed mats, mulch, spraying, mowing, cover crops, intercropping, grazing), and irrigation (flood irrigation, drip line, hand lines, water trucks, rainfall).

Our riparian restoration methodologies are now highly refined and represent one of the best examples of how wildlife habitat can be created at a low cost per acre. Current projects focus on the restoration of both woody and herbaceous species, and provide structurally complex (vertically and horizontally) and spatially diverse habitats. As part of our restoration planning, each site goes through a comprehensive assessment process (Luster et al. *in prep.*) to identify the mix of native species and planting strategy that is best suited to local site conditions. The diversity of our plantings has increased dramatically in recent years as more species have been

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added to the planting palette; we now actively propagate local ecotypes of 22 tree and shrub and 15 herbaceous species.

In recent years our monitoring and evaluation of restoration projects has become increasingly rigorous. Since 1993 we have worked with the Point Reyes Bird Observatory to better understand avian species requirements on Sacramento River floodplain habitats. Many modifications to our restoration designs (e.g., planting in patches, restoring a diverse understory) have come as a direct result of this longstanding partnership. Important recommendations that have come from these monitoring efforts have been summarized in the Riparian Bird Conservation Plan (RHJV 2000), a document that is of great utility to restoration practitioners and agriculturists alike (Golet 2001).

More recently, and thanks to the support of CALFED, we have partnered with academics with expertise in botany and restoration ecology. Together, we are making detailed evaluations of the outcome of past restoration efforts and adding a formal experimental element to our trials of new restoration techniques. Task 3 of proposal 171DA, which was recommended for funding, includes research that is certain to advance our understanding of how planted species respond to local site conditions, larger landscape factors, and the treatments imposed upon them.

Incorporating experimentation into new restoration efforts was to be conducted on newly restored sites that were proposed for funding under this proposal (Tasks 1 and 2, planning and restoration implementation). However, since these tasks were not recommended for funding, we are now facing logistical challenges in carrying out Task 3. This gives us further cause to request that the restoration we proposed be funded.

Evidence that the approaches we have employed are successful in achieving the restoration of native species and communities to the Sacramento River ecosystem comes from numerous studies that The Nature Conservancy's Sacramento River Project has directed funding towards. We have seen, for example, that our restoration sites provide critical foraging and breeding habitat for a wide variety of species (including special-status birds, mammals, and insects—see studies posted at: <http://www.sacramentoriverportal.org/reports/index.htm>).

### **Response to Research and Restoration External Reviews**

Overall, the External Reviews were favorable of the approaches outlined in the proposal. However, the second reviewer states in the third paragraph of the Goals section:

“My major concern with the proposal is that it largely uses an active intervention approach with no comparison to restoration through natural processes (i.e., flooding and natural recolonization by riparian species)...But it would be exciting to see a rigorous comparison of these more horticultural intervention approaches with natural flood and regeneration processes.”

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This comparison between process restoration and horticultural restoration is currently being undertaken. With an academic partner we are monitoring long-term plots in remnant riparian habitats with standard forestry techniques, and one component of Task 3 of this proposal will utilize the exact same methodologies to monitor long-term plots at restoration sites planted 7-12 years ago. The work proposed in Task 3 was designed to complement the existing effort and will facilitate comparisons in vegetation community development patterns between remnant habitats and restoration sites.

In the Products section of the second External Review, the following suggestion was made:  
“I encourage TNC to consider modification of the design to better examine natural restoration influences of flooding.”

Effects of flooding on vegetation community patterns is one of the factors that will be examined at the long-term plots that are being surveyed in as one component of Task 3. This will be done by relating historical flow patterns to stage-discharge relationships developed for the long-term plot sites.

Further clarification on the appropriateness of a horticultural approach for restoration of these properties follows:

Direct loss of habitat is one of the primary reasons that many native species and communities of the Sacramento River ecosystem are in such dire circumstances. To improve the situation more habitat must be created in the short term. While restoring natural processes provides one means of creating new terrestrial habitats, the approach has its limitations. The most significant of which is that natural process restoration only works on the lowest lying areas of the floodplain where there are appropriate hydrogeomorphologic conditions. Such sites are limited on the Sacramento River, where much of the habitat that needs to be restored to create large blocks of contiguous habitat is removed from the erosional and depositional forces that foster natural recruitment events.

Higher floodplain lands such as those proposed for restoration in proposal 171DA are typically in orchards and/or are infested with non-native invasive species (e.g., starthistle, Johnson grass, Bermuda grass) that inhibit the colonization and proliferation of native vegetation. Even when these sites are artificially flooded coincident with the dispersal of native propagules, exotic species come to dominate, as was determined experimentally on the Sacramento River by Peterson (2002) in a collaborative study between USFWS and TNC. Waiting for the river to meander across the floodplain to create new habitat is also not a viable alternative as it will take decades, if not centuries for the land to be reworked, even in those places where the river is not constrained by bank revetment and levees. Approaches to altering river flow management is a much more complex political endeavor than the reviewers suggest. We will begin working on investigating flow changes through a proposed CALFED funded proposal (#167DA); however, changing flows in order to flood this elevation of the floodplain without flooding river communities and infrastructure such as roads and bridges is not appropriate.

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As was articulated on p. 3 of our proposal:

“Active horticultural restoration is often an important component of ecosystem restoration where natural regeneration is slow to occur or NIS vegetation threatens to dominate a site (Whisenant 1999). In addition, active horticultural restoration can aid in the rehabilitation of riparian communities where natural recruitment of riparian vegetation is impeded by diminished erosional and depositional processes (Friedman et al. 1995), and other alterations to the natural hydrograph (Mahoney and Rood 1998, Andersson et al. 2000, Tu 2000).”

In closing, the four properties proposed for restoration under this proposal are currently in public/conservation ownership, with less than 2.5% of the 1,056 acres subject to a Williamson Act contract (which will shortly become null and void on its own terms). An Environmental Assessment and Final Finding of No Significant Impact for Proposed Restoration was developed, determined and approved on 80% of the area to be restored, and any additional environmental documentation will be developed as determined appropriate by the CEQA lead agency, who has yet to be determined. Funding the restoration of these properties will help us carry out the research and monitoring studies (Task 3) recommended by the Selection Panel, and perhaps more importantly, enable us to continue to “improve and increase aquatic and terrestrial habitats and improve ecological function to support sustainable populations of diverse and valuable plant and animal species,” a primary objective of the Ecosystem Restoration Program (CALFED 2001).

Thank you for your consideration.

Respectfully submitted,



Ryan Luster  
Restoration Program Manager  
The Nature Conservancy

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