CALFED Bay-Delta 2002 ERP Directed Actions
Selection Panel Review

Proposal Number: 150DA
Applicant Organization: Solano Land Trust
Proposal Title: Restoring Ecosystem Integrity in the Northwest Delta: PHASE II

Recommendation: Fund With Conditions –

Amount: $1,563,506

Conditions, if any, of approval (if there are no conditions, please put "None"):

1. If conservation easements are to be acquired on lands enrolled in the Williamson Act program, the land trust shall coordinate with Solano County and the Department of Conservation.

2. Development of plans for potential restoration of the Calhoun Cut Ecological Reserve shall be prepared in coordination with the Solano County Water Agency.

Provide a brief explanation of your rating:

The project will protect sensitive north Delta lands with conservation easements, and plan for potential restoration of existing public lands in the area. As revised, it responds adequately to concerns raised in the proposal's prior selection panel review. The project has been coordinated with the Delta Protection Agency, whose comment letter supports the project, and with the local reclamation district and adjacent property owners. Conservation easements obtained from willing landowners will be used to protect sensitive areas, instead of purchasing farmland and potentially eliminating it from farm use, as previously proposed, thereby avoiding impacts to agriculture. Because of the many important water and land uses in the area, the selection panel recommends grant conditions to assure that planning and conservation there is adequately coordinated with directly affected agencies.

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Research and Restoration External Review Form
CALFED Ecosystem Restoration Program 2002 Proposal Solicitation Package

Proposal Number: 150DA
Applicant Organization: Solano Land Trust
Proposal Title: *Restoring Ecosystem Integrity in the Northwest Delta: PHASE II*

Review:

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

1-Excellent

As noted in the scientific technical panel's summary, this project focuses on a highly endangered ecosystem that harbors a large number of at risk species. The overall proposal was ranked as superior and components 3 and 4 were subsequently funded. The technical panel had no significant negative comments on components 1 or 2.

NOTE: Given that components 3 and 4 were funded, I will limit my comments in this and following sections to components 1 and 2.

It seems that the concerns of subsequent reviewers on land acquisition effects on surrounding agriculture are resolved by the proposal to use a strategy of conservation easements. Also the concerns of the effects of flooding by the restoration activities seem to be well addressed by the proposed bathymetric and hydrological analyses and restoration feasibility plan.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

1 – Excellent

The importance of the lands to be acquired by conservation easements is very clearly presented and the strategy of easements as opposed to fee acquisition is well justified. Concerns on flood control would suggest that the hydrological and bathymetric studies are required before restoration plan development and full implementation of the restoration activities proposed for Phase III

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

1-Excellent

Although the use of conservation easements will encourage continuation of extensive agriculture, easements do not provide quite the same level of "control" of activities as fee title acquisition of a parcel. Thus, the proposal by SLT to help land owners develop weed management plans is an excellent idea that will help to attain the restoration goals and provide sufficient protection of at-risk species. In addition, this easement approach will also allow SLT to access more, and higher quality acreage. The landowner outreach activities planned as well as the extensive hydrological study should pretty much address the concerns of the stakeholders.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

1- Excellent

The applicants have really done their homework (via Phase I) in assessing the ecological potential and conservation value of properties within the Jepson Prairie-Prospect Island Corridor. As a result, they have an excellent ranking of properties for easements and this will make the easement acquisition process much more likely to occur rapidly and efficiently. The linkage of the hydrological/bathymetric study to the development of restoration alternatives seems to be strong and a necessary component for this project to move forward.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

1- Excellent

The timeline for conservation easement acquisition is well defined and reasonable. The bathymetric studies and hydrological modeling are necessary and appropriate precursors to the development of the restoration plan.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

1- Excellent

In addition to the obvious importance of obtaining the easements, the bathymetric studies will provide valuable guidelines for further restoration in this region. In addition, the preparation of the restoration plan will be an extremely important product.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

2- Very good*

The applicants have an excellent record in fulfilling goals under prior CALFED funding and have been very effective in developing management plans for the Jepson Prairie ecosystem. My experience with this team in land conservation and restoration projects has been completely positive; an excellent group of professionals.

***The only reason I have not put an excellent rating here is because I am not familiar with the Phillips Williams and Associates firm and so I cannot evaluate their capabilities.**

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

2-Very good

Allocations for the conservation easements seem very reasonable. The consulting fees seem a bit pricey but I must admit that I do not have a good feeling as to what these types of bathymetric/hydrological studies normally cost.

Miscellaneous comments:

Please provide an overall evaluation summary rating: Excellent: outstanding in all respects; Good: quality but some deficiencies; Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
xx- Excellent	Protection of critical land parcels is central to the success of this proposal. The strategy of using easements is an excellent modification of the original proposal that will increase the potential that the maximum amount of the most valuable properties will be protected and also address concerns that extensive agricultural activities might be curtailed in acquired lands. This easement approach, when coupled with the development of weed management plans with landowners, will also facilitate outreach and stakeholder cooperation. The bathymetric studies are a good addition that will address flooding concerns and will also increase the probability that future restoration plans in the Corridor will succeed.

Research and Restoration External Review Form
CALFED Ecosystem Restoration Program 2002 Proposal Solicitation Package

Proposal Number: 150DA
Applicant Organization: Solano Land Trust
Proposal Title: Restoring Ecosystem Integrity in the Northwest Delta: PHASE II

Review:

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

The goals and objectives are clearly stated. The project is timely and important because it focuses on conservation and restoration of vernal pools, perennial grasslands, and riparian woodlands in the Delta/Bay region. Combined with Phase I, this project will make a major contribution to protection of vernal pool habitats, which have declined precipitously in the Central Valley and which contain a large number of threatened and endangered species. The goals of the proposal are to purchase conservation easements totaling 1,100 acres of high priority lands and to conduct a feasibility study for restoration of Calhoun Cut, both of which would lead to increased protection and restoration of these critically imperiled habitats. This is combined with a previously funded effort to conduct research on agricultural activities that maintain and enhance native biological diversity. The project seems realistic and well planned, particularly in concert with other research and conservation efforts underway by SLT.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

The project is definitely well justified. The conservation and restoration efforts include an area of Solano County that is rich in biological diversity but that is currently unprotected. The conceptual basis for the conservation and restoration project relies heavily on basic conservation concepts regarding habitat area and connectivity, derived from the concepts of island biogeography (MacArthur and Wilson 1969) and the rescue effect (Brown and Kodric-Brown 1977). The authors of the proposal have incorporated reviewers' suggestions that they shift their strategy from one of land acquisition to land management via conservation easements. Additionally, the feasibility study allows time to develop effective plans and strategies for restoration of the Calhoun Cut, which should contribute significantly to conservation of riparian, marsh, and vernal pool ecosystems.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the

project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

The approach is well designed and appropriate, given comments on the previous proposal by reviewers. SLT has now shifted their efforts from outright purchase of the Pembco property to acquisition of conservation easements on 1,100 acres of high priority lands. Although the system for evaluating these lands is only briefly described, the information that is available suggests that a combination of aerial photos, local knowledge, and habitat surveys were used to determine "ecological value." Thus, the method of prioritization appears to be defensible and repeatable. I particularly support the feasibility study of the Calhoun Cut restoration as an important step in the next phase of the project.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

The project's feasibility hinges on the Solano Land Trust's ability to obtain conservation easements on the 1,100 acres designated "Level 1" from willing landowners. Given the experience of the Solano Land Trust, this goal appears to be highly feasible. SLT has developed strong relationships with local landowners and conservation organizations such as The Nature Conservancy (TNC). The SLT has a strong presence in this region and is the obvious choice for long-term stewardship and management. Experienced hydrologists will conduct the restoration feasibility study, which is a strength of the project. Because this proposal is Phase II of a three-phase project, and Phase I has already been completed, I am confident that the SLT is capable of success in this type of project and it seems very likely that they will succeed in the next phases.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

The performance measures are very simply stated and sufficiently judge the success of the project. The first measure is simply the acquisition of the 1,100 acres of conservation easements. The second is the completion of the hydrological study and feasibility analysis, and the development of a restoration plan.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

The products of this project will be valuable for conservation (the easements) as well as for future restoration efforts (the feasibility study and restoration plan). I applaud the authors for investing in the feasibility study because it will provide a

strong foundation for future restoration efforts. I suggest that the restoration plan also include a research component, if possible, so that future projects in this region can benefit from the efforts and experience of this restoration effort.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

The SLT has a new interim director with valuable experience in another land trust organization that will be beneficial in the current proposal's conservation easement transactions. The SLT has a strong track record in implementing land conservation and restoration projects. The rest of the staff has long-term experience in Solano County, which is valuable. The consultants have expertise in hydrology and plant ecology, which will be crucial in conducting the feasibility study and developing the restoration plan.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

The budget appears to be reasonable and adequate for the work proposed. The major component of the budget (about 2/3) is for the purchase of conservation easements, and about 1/3 of the budget is for conducting the feasibility study and developing the restoration plan. These funds are essential to the success of the project. Funds for staff and consultant time are reasonable and suggest that the team will work efficiently to accomplish the acquisition, feasibility study, and restoration plan.

Miscellaneous comments:

This project is critical because it will make a significant contribution to land conservation and restoration in this part of the Delta/Bay region. Additionally, the feasibility study and restoration plan should provide important information to other individuals and organizations involved in future conservation and restoration efforts in this region.

Please provide an overall evaluation summary rating: Excellent: outstanding in all respects; Good: quality but some deficiencies; Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
✔ Excellent	The project will contribute significantly to conservation and restoration of imperiled ecosystems in the Delta/Bay region. The project includes realistic and careful assessments of the feasibility of restoration efforts in this region.
- Good	
- Poor	

Ecosystem Restoration Program –Directed Action: Land Acquisition

Proposal Number: 150DA
Applicant Organization: Solano Land Trust
Proposal Title: Restoring Ecosystem Integrity in the Northwest Delta: PHASE II

1. Is the site's ecological importance documented in the proposal? **YES** If yes, please import relevant text and citations here

The Cache Slough complex, while only a small part of the vast Bay-Delta ecosystem, in eastern Solano County was once a large and vitally linked ecosystem composed of dead end sloughs and adjacent riparian, marsh, vernal pool and perennial grassland habitats. The complex provides essential habitat for resident and migratory fish, waterfowl, songbirds, mammals, amphibians, reptiles, invertebrates and plants. Its southern arm follows Lindsey Slough upstream from the Sacramento River where it splits into two smaller dead end sloughs, Barker Slough and Calhoun Cut. This portion of the Lindsey Slough watershed is known as the Jepson Prairie-Prospect Island Corridor (Corridor)… the Corridor is comprised of 11.4 miles of slough habitat, 614 acres of tule marsh and riparian habitat, 38 acres of mid-channel islands and one of the largest and most intact vernal pool/perennial grassland complexes in the state of California

Table 1. Target habitats identified by CALFED that occur in the Jepson Prairie-Prospect Island Corridor (CALFED 2001).

Habitat Type	*Approximate existing area or length*
Dead end slough	11.4 miles
Riparian/Marsh	614 acres
Mid-channel islands	38 acres
Vernal pool/perennial grassland	>17,000 acres

CALFED Ecosystem Restoration Goals and Objectives fulfilled by Component 1
Ecosystem Restoration Goal 1: Endangered and other at-risk species and native species.

Protection of the habitats will contribute to the fulfillment of Objectives 1-4 by protecting native freshwater fish assemblages, neotropical migratory birds, wading birds, waterfowl, freshwater marsh plant communities, riparian plant communities, seasonal wetland plant communities, vernal pool communities, aquatic plant communities, and terrestrial biotic assemblages associated with aquatic and wetland habitats and contributing to the recovery of at-risk species including Mason's lilaeopsis, Suisun marsh aster, delta tule pea, Crampton's Tuctoria, delta mudwort, alkali milkvetch, Bogg's lake hedge-hyssop, heartscale, Swainson's hawk, bank swallow, western pond turtle, California tiger salamander, and Sacramento perch.

Ecosystem Restoration Goal 4: Habitats
Protecting these important lands will contribute to the fulfillment of Objectives 3 and 4 by protecting existing connected high quality aquatic, wetland and riparian habitats; minimizing the conversion of agricultural lands to intensive agriculture or suburban development; and provide a buffer to proposed restoration sites including the Calhoun Cut Ecological Reserve.

Ecosystem Restoration Goal 5: Nonnative Invasive Species
Protecting these important lands will contribute to the fulfillment of Objectives 5 and 6 by prohibiting planting of non-native invasive species and encouraging control of these species.

…The Jepson Prairie-Prospect Island Corridor presents a rare opportunity to restore an entire slough system from the upper reaches of its watershed to its confluence with the Sacramento River. In the upper corridor a vast and nearly connected area of nearly 5,000 acres is already protected by SLT, the California Department of Fish & Game, The Nature Conservancy and mitigation holdings while in the lower watershed over 3,200 acres are protected by the Trust for Public Land and the Bureau of Reclamation (Figure 1). The protected acreages include vernal pools, perennial grasslands, marsh, riparian and slough habitats. Each of these habitats is rich in species, 29 of which are targeted for recovery by CALFED and other agencies (Table 3).

The vital link between slough and the upland has been compromised and, in many cases, severed. Large earthen levees have long isolated the slough from its floodplain causing the tule marshes to shrink and almost completely wiping out riparian vegetation. In the grasslands, laser leveling, trenching, over and undergrazing have contributed to a loss of species. This is compounded by the massive influx of non-native invasive species. Annual grasses, such as Italian ryegrass, not only displace natives through their presence but also through the buildup of thatch (Barry 1998). Accumulated thatch absorbs significant water causing vernal pools to fill more slowly and reduces the pools' hydroperiod. This, in turn, permits the advance of the ryegrass further into the once prohibitively wet pool and displaces native species (Keeley and Zedler 1998).

In many cases, natural drainage from upland to the slough has been channelized delivering high velocity, sediment laden waters across bare banks and into the sloughs. The reduced ability of the slough system to retain water due to loss of floodplain and meandering capability causes higher peak flows, which may cause fish and invertebrates to be flushed from the system. Water quality is reduced during these periods.
The proposed actions in this grant are designed to abet these circumstances. Ongoing restorative actions in the uplands such as controlled burning and seasonal grazing will reinstate the ecological processes with which all obligate vernal pool species have evolved. Stopping the spread of weeds in the upper watershed is crucial to slowing infestations in the lower watershed (Pringle 2001, Kennedy et al. 2002). This restoration of process is the first step toward stabilization and recovery of at risk species.
By protecting up to 1,100 acres of land fronting the sloughs with conservation easements, a large preemptive step will be taken to stem the spread of non-native invasive plants, to

preserve the extensive agricultural heritage and protect both upland and aquatic habitats from development. Acquisition of conservation easements is always from willing sellers and landowners play a vital role in shaping the language of the easements.
The publicly owned Calhoun Cut Ecological Reserve offers the greatest opportunities for habitat restoration in the entire Jepson Prairie-Prospect Island Corridor. The Reserve supports vernal pool, perennial grassland, marsh and riparian habitats and is leased for grazing throughout the year. Its biological resources are well documented. In the uplands, a complete floral survey was conducted in 1994 (Witham and Kareofelas 1994) while a CALFED funded fish and macroinvertebrate survey was conducted in both Barker Slough and Calhoun Cut directly adjacent to the Reserve in 2001 (Garcia and Associates 2001).

When Calhoun Cut was dredged 80 years ago, flow was directed away from the original channel. The original channel, which may be called South Barker Slough, is still visible to the south (Figure 2). Although South Barker Slough still maintains a network of tule marsh, its extent is reduced and its function is greatly compromised because of the reduced flow and minimal tidal action. A feasibility study would examine the potential for restoring flow to South Barker Slough. As an alternative, the study would examine the potential for connecting Calhoun Cut to its floodplain through removal and/or setbacks of levees at the Reserve. Both of these actions would serve as major steps toward restoring ecosystem function to the upper watershed of the lower Cache Slough complex. Expected benefits include normalized flow velocities, reduced sedimentation, increased shallow water habitat at the appropriate time of year to benefit native fish life cycles, and increased marsh and riparian habitat. Development of riparian habitat benefits both terrestrial and aquatic species by substantially increasing habitat complexity (Nakano and Murakami 2001; Krajick 2001).

2. Is the owner's willingness to sell the site documented in the proposal? If no, please explain:

Specific properties to be acquired within the project area are not identified. Rather the proposal states only that: "Within the Corridor, roughly 1,100 acres rank as Level 1 or top priority for protection… Level 1 land will be sought first. If not all the funds are spent or if not all landowners are interested, Level 2 lands will be explored (p10). The proposals attachment 1 (p. 21-22) lists three parcels totaling 1160 acres as Level 1 priorities, and an additional 4 parcels totaling 2355 as Level 2 priorities. The proposal pledges that "Acquisition of conservation easements is always from willing sellers and landowners play a vital role in shaping the language of the easements (p7)." The proposal doesn't indicate whether landowners in the Level 1 or Level 2 areas have been contacted to assess their interest in selling easements, or whether alternative measures for achieving the project's goals would be feasible.

3. Is evidence of local government support for the purchase included in the proposal? If yes, please explain:

No. The proposal does not include any information about Solano County's position on the proposal. A letter of support from the local rcd is included in the application, and one has been received from the Delta Protection Commission.

4. Is the use proposed for the site after its purchase clearly consistent with the site's general plan designation and zoning? If no, please explain:

The site will remain in agricultural use, according to the applicants. Because the applicants do not propose to change land use, the proposal does not include information about local zoning or general plans.

5. Is the land mapped as prime farmland, farmland of statewide significance, unique farmland, or farmland of local importance? If yes, please explain the classification:

- Is the site under a Williamson Act contract? Because a change in land use isn't proposed, the application does not include information about Williamson Act contracts.

Because the applicants do not propose to change land use, the proposal does not include information about Williamson Act contracts in the project area.

- Will use of the site change from agriculture after its purchase?

The site will remain in agricultural use, according to the applicants.

6 Is this a time-sensitive acquisition opportunity, according to the proposal? If yes, please import relevant text here:

No information about the easement acquisitions' time sensitivity is offered. The proposal lists conversion of vernal pool habitat as a general stressor to this type of landscape, and states "The Greater Jepson Prairie Ecosystem, in which the Corridor sits, has been spared to some extent by its relatively infertile soils but recent demand for land by real estate developers, power companies, Travis Air Force Base and potential ranchette owners poses a serious threat to this area." Planned improvements to Highways113 + 12 will make access to the area easier in the coming decade.

Other Comments: The proposal's budget justification does not indicate what the expected per-acre costs of conservation easements may be, or whether the amount sought is sufficient to acquire easements on the 1,100 acres it seeks to secure.

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CALFED Bay-Delta Directed Action
Administrative Review
Budget Evaluation

Proposal number: #150DA
Applicant Organization: Solano Land Trust
Proposal title: Restoring Ecosystem Integrity in the Northwest Delta: PHASE II

Does the proposal include a detailed budget for each year of requested support? **Yes**

If no, please explain:

Does the proposal include a detailed budget for each task identified? **Yes**

If no, please explain:

Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs? **Yes**

If no, please explain:

Are appropriate project management costs clearly identified? **Yes**

Note that project management is not identified as a separate task, but according to the budget justification, 400 of the total 775 Solano Land Trust staff hours (Coons + Meisler) are budgeted for project management under Task 1, Conservation Easement Acquisition (Coons; 600 hrs) and Task 4, Restoration Plan (Meisler, 175 hrs).

If no, please explain:

Do the total funds requested (Form I, Question 17A) equal the combined total annual costs in the budget summary? **Yes**

If no, please explain (for example, are costs tp be reimburse by cost share funds included in budget summary).

Does the budget justification adequately explain major expenses? **No**

If no, please explain:

The budget justification does not adequately explain the details of the "Other Direct Costs" line item other than identifying that "Pre-acquisition Costs" include appraisals, title reports, baseline surveys and attorney fees; however, Table 5, p. 18 of the proposal text, breaks "Other Direct Costs" down into "Pre-acquisition Costs" and "Acquisition Costs" which better explains that line item.

Are there other budget issues that warrant consideration? **No**

If yes, please explain:

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