SACRAMENTO - SAN JOAQUIN
DELTA CONSERVANCY
*A California State Agency*

PROP 1
GOVERNOR EDMUND G. BROWN, JR.
WATER BOND 2014
RELIABILITY | RESTORATION | RESILIENCE

# Proposition 1 Grant Program

## *2016-17 Staff Recommendation*

## I. Project Overview

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| **Project Title** | Petersen Ranch: Working Waterway Habitat Enhancement Project | | |
| **Applicant** | Solano Resource Conservation District | | |
| **Project Number** | Prop 1-1605 | | |
| **Category** | 2 | **Funding Request** | $444,795.00 |
| **County** | Solano | **Total Project Cost** | $739,861.00 |
| **Score** | 85.6 | **Funding Recommended** | $444,795.00 |
| **Staff Recommendation** | Approval of funds conditional upon submittal and approval of:<br>(1) a revised budget. | | |

## II. Staff Recommendation

Delta Conservancy staff recommend that the Board approve funding for the Petersen Ranch: Working Waterway Habitat Enhancement Project (#Prop 1-1605) proposed by Solano Resource Conservation District (RCD) conditional upon the submittal and approval, by May 2017, of:

(1) a revised budget that addresses the clarifications noted in the budget section, below.

Staff has prepared the text below based on staff's best understanding of the information provided in the application. The Conservancy has received comments on the proposal from the Professional Review Panel, the Delta Stewardship Council, the Office of the Delta Watermaster, and any local governments and districts, water agencies, and tribes that responded to the local notification process. Prior to entering into a grant agreement, staff will work with the applicant to further refine the project's scope of work and to address any remaining comments.

## III. Project Overview

**Project Description:** The Petersen Ranch: Working Waterway Habitat Enhancement Project will pair cattle management practices with ecosystem restoration practices to create 13.5 acres of riparian habitat on actively farmed and grazed ground in the northern part of the Petersen Ranch along Lindsey Slough. It will provide riparian habitat and improve water quality. This category 2 project will provide watershed benefits that align with Proposition 1 and State priorities, and that will be maintained for at least 15 years.

The project includes installation of nearly 6.5 miles of fencing structures and provides off-stream water sources for livestock. This will ensure that cattle no longer have direct access to surface waterways that discharge into sensitive Delta habitats and will create a riparian corridor available for restoration activities. The riparian corridors will be planted with a diverse mix of native trees, shrubs, grasses, sedges and forbs to create 13.5 acres of wildlife habitat that will also serve as filter strips for irrigation and storm water runoff. It is anticipated that the removal of cattle and creation of riparian filter strips will provide significant ecosystem benefits to this area of the Delta, including increased habitat for terrestrial and invertebrate species, reduced erosion and improved water quality, enhanced ecological

condition of ranch waterways, and carbon sequestration. The completed project will serve as a useful pilot project demonstrating that ecosystem restoration is compatible with surrounding farming operations and modeling effective habitat restoration techniques in a working agricultural landscape. The project has been designed to accommodate climate change by planting a wide range of moisture and temperature tolerant species to ensure the adaptability of the plants to variable conditions. The proposed project offers climate benefits to the Delta, both for wildlife and total carbon sequestration potential. The project's riparian corridors will connect to existing natural habitat features along Lindsey Slough, which will facilitate wildlife movement and provide appropriate vegetation resources in the event of sea level rise and temperature increases. Estimates of carbon sequestration potential at the project site over 20 years have been calculated using two different models, and range between 270 and 866 metric tons.

The applicant, Solano RCD, has extensive experience restoring native vegetation in riparian, floodplain, and upland habitats across Solano County and completing community-based restoration projects with multiple partners. The RCD has an established track record of meeting the terms of funders' budgets and work plan timelines. In Fiscal Year 2016/17, Solano RCD staff is managing 23 restoration and conservation projects in Solano County, funded by State, Federal and local monies. This project will be implemented in partnership with the landowner and the Natural Resource Conservation Service (NRCS), which provides technical and financial assistance.

**Consistency with State Priorities:** The benefits of Petersen Ranch: Working Waterway Habitat Enhancement Project will help implement the priorities of the State. The project's consistency with State plans is listed below. The list below was provided by the applicant and has been reviewed and edited by staff to include consistencies that agree with the intent of the project.

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- Section 79732(a)(1): Protect and increase the economic benefits arising from healthy watersheds, fishery resources, and instream flow.
- Section 79732(a)(2): Implement watershed adaptation projects in order to reduce the impacts of climate change on California's communities and ecosystems.
- Section 79732(a)(4): Protect and restore aquatic, wetland, and migratory bird ecosystems, including fish and wildlife corridors and the acquisition of water rights for instream flow.

California Water Action Plan

- Action 3: Achieve the Co-Equal Goals for the Delta.
- Action 4: Protect and Restore Important Ecosystems.
- Action 5: Manage and Prepare for Dry Periods.

Delta Conservancy's enabling legislation

- Section 32301(i):
  - (1) Protect and enhance habitat and habitat restoration.
  - (2) Protect and preserve Delta agriculture and working landscapes.
  - (6) Protect and improve water quality.
  - (9) Protect, conserve, and restore the region's physical, agricultural, cultural, historical, and living resources.
  - (12) Promote environmental education through grant funding.

Delta Conservancy's Strategic Plan

- Goal 1: Establish the Conservancy as a valuable partner with Delta growers, agriculture-related businesses, and residents in protecting and enhancing the Delta's agricultural and working landscapes and sense of place.
- Goal 2: Lead economic enhancement activities that support the Delta ecosystem and economy.
- Goal 3: Lead efforts in protecting, enhancing and restoring the Delta ecosystem in coordination with other governmental and non-governmental entities and citizens in the Delta.

Delta Plan

- ER R2: Prioritize and Implement Projects that Restore Delta Habitat.
    - The Project will develop habitat in the priority area of the Cache Slough Complex, as identified in ER R2**.** However, the map in ER P2 (Restore Habitats at Appropriate Elevations) designates the project area as sub-tidal. In the project proposal, the applicant identified that the proposed project is not consistent with this map designation; however, the Delta Stewardship Council did not note any concerns in their comments on the project.
- ER P5: Avoid Introductions of and Habitat Improvements for Invasive Nonnative.
- DP P2: Respect Local Land Use When Siting Water or Flood Facilities or Restoring Habitats.
- DP R10: Encourage Wildlife-friendly Farming.
- Chapter 6: Improve Water Quality to Protect Human Health and the Environment.

**Location & Site Description:** The project is located in Solano County just north of the City of Rio Vista. The project site is in private ownership, and is managed as a grazing operation. The land use in the area is perennial pasture and alfalfa. See Attachment 1 for a project location map.

**Budget:** The proposal requested $444,464 from the Conservancy for the installation of livestock infrastructure and waterway habitat. The total cost of the project is $739,861. The applicant included a proposed cost share of $295,397, including $177,000 cash match from NRCS, $99,637 in-kind match from the landowner, and $18,760 cash and in-kind match from the Center for Land-Based Learning. The applicant failed to provide adequate documentation indicating that the cost share from NRCS had been secured by the time of application, as required by the Conservancy's grant guidelines.

Staff recommends approval of the project that is conditional upon submittal and approval of:

- A clarified budget table and Costa Allocation Plan that explains why indirect and direct costs both include Office Manager's and Executive Director's time.
- Additional detail regarding supplies, rentals, and travel in the line item budgets.

**Readiness:** The applicant, serving as the lead agency for this project, concluded that the project is exempt from CEQA under Section 15304 "Minor Alteration to Land" because it involves no removal of vegetation, earth work, or major changes to the landscape. The applicant has stated that they are not a covered action under the Delta Plan because they are exempt from CEQA. Staff will work with the applicant to ensure that the project's covered action status is correct and properly justified during the negotiation of the grant agreement. No other permits are anticipated. The project will begin implementation work immediately upon execution of the grant agreement with the Delta Conservancy.

**Long Term Management & Maintenance:** This project has been designed to successfully establish native plantings within the grant award period, which will minimize the need for significant future maintenance activities. Once established, the native trees, shrubs, grasses, and forbs will effectively compete with

non-native annual weeds. The landowners (the Hearn family) are responsible for long-term management of the site. They will perform maintenance activities as necessary after the close of the grant term. The Hearns' commitment to management of the site is also required by their contract with NRCS, which will provide cost-share funding for all components of this project. The applicant will be required to enter into a landowner access agreement as a condition of the Delta Conservancy's grant agreement. The RCD is also committed to conducting bi-annual site visits to the Peterson Ranch for 15 years. These visits will ensure continued communication with the landowners, visual assessments of plant establishment and project success, the ability to work with ranch managers to oversee vegetation management activities, and the opportunity to evaluate new management challenges that require updated approaches over the long-term.

## IV. Scientific Merit

A project's scientific merit is based upon its use of best available science, adaptive management approach, performance measures, and monitoring and assessment plan.

The proposal justifies the scientific basis of the project's need and proposed course of implementation. There is a tremendous need for projects that bring native vegetation back to the landscape in any way that is feasible, as more than 98% of the Central Valley's historic riparian habitat has been lost or degraded; working agricultural waterways are some of the best remaining surrogate for those lost habitats. There are well-documented links between the establishment of vegetation along waterways and improved wildlife habitat values and water quality, as well as the carbon sequestration benefits of established native perennial vegetation. Additionally, existing research supports the benefits of restricting cattle from riparian areas. The proposed project will implement these widely applied and accepted conservation practices to meet its objectives.

The proposal describes adaptive management in the context of the Delta Plan's three-phase, nine-step framework. Performance measures include the establishment of habitat and the improvement of water quality; these measures have been designed to measure the ecological benefits of the project, and results will be compared to baseline data. Water quality analyses will show whether restoration at this scale will have measurable benefits at the site level, and, if so, will lend support to similar future work. The defined problem predicts that removal of cattle will allow native vegetation to establish successfully. Data on survival, coverage, and plant condition will inform adaptive management during implementation. The RCD will conduct annual site visits through 2032 to evaluate new challenges and update management approaches over the long-term. Adaptive management plans may be revised as a condition of the grant agreement.

The project's performance measures, excepted below, indicate how the project will meet its stated objectives. If the project is approved, staff will work with the applicant to refine performance measures and align them with the monitoring plan during the negotiation of the grant agreement.

Outputs:

- 23,000 linear feet (13.5 acres) of riparian habitat is planted with native trees and shrubs; native grass, sedge and forb species; and native grass understory.
- Non-native weeds are controlled throughout the project site.
- Cattle will no longer urinate or defecate near waterways in the project areas.
- Riparian areas not trampled and soil erosion prevented by precluding cattle from moving in and out of waterways to access water.

Outcomes:

- Terrestrial wildlife and beneficial insect populations will benefit from being able to utilize a greater diversity of food and shelter resources.
- Carbon will be sequestered in both the woody plant and soil components of the planted areas.
- Functional vegetated filter strips will be established along project waterways, leading to lowered temperature and turbidity and increased dissolved oxygen during irrigation events compared to baseline values.

RCD staff will implement a monitoring program to evaluate project effectiveness. In accordance with the State's Wetland and Riparian Area Monitoring Plan (WRAMP) framework, Solano RCD identified monitoring questions and measurable metrics to assess the project's success. The questions to be answered via a monitoring program are:

1. Are plants establishing well enough to provide adequate cover of what was previously bare ground and to ensure their long-term survival?

2. Has the landscape changed in a way that will benefit wildlife?

3. Has water quality on the Ranch improved?

These questions will be addressed through a monitoring program that incorporates site-wide monitoring of vegetation establishment, and more intensive sub-site photo monitoring, random quadrant sampling, California Rapid Assessment Method (CRAM) analyses, and water quality sampling. Project success will be monitored regularly over the course of implementation and will generate habitat restoration data (survivorship, vegetative cover, CRAM scores) and water quality data (temperature, dissolved oxygen, turbidity, electrical conductivity) that will be publicly available on EcoAtlas and California Environmental Data Exchange Network. Monitoring and assessment plans may be revised as a condition of the grant agreement.

## V. Local Support

The project is proposed with the full support of the landowner and neighboring property owners. Solano County has been a supportive voice in the development of the project; a resolution from Solano County supporting the project was included in the proposal package. The project will be implemented by a diverse partnership of the landowner, the RCD, NRCS, and youth from the California Conservation Corps (CCC) and the Center for Land-Based Learning's SLEWS (Student and Landowner Education and Watershed Stewardship) program. The proposal includes 10 letters of support from local districts, county departments, neighboring landowners, State and federal agencies, and non-profit organizations.

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**Attachment 1. Project Location Map**