



SACRAMENTO - SAN JOAQUIN

DELTA CONSERVANCY

A California State Agency



Proposition 1 Grant Program

2015-16 Staff Recommendation

I. Project Overview

Project Title	Fish Friendly Farming Certification Program for the Sacramento-San Joaquin Delta		
Applicant	California Land Stewardship Institute		
Project Number	Prop 1-Y1-2015-005	Category	1
County	Delta-wide	Funding Request	\$89,450
Score	85.1	Total Project Cost	\$134,175
Staff Recommendation: Making findings required for funding activities outside of the legal Delta, and approval of funding.	Funding Recommended	\$89,450	

II. Staff Recommendations

Delta Conservancy staff recommends that the Board make findings required for funding activities outside of the legal Delta, and approve funding for the Fish Friendly Farming Certification Program for the Sacramento-San Joaquin Delta project (#Prop 1-Y1-2015-005) proposed by the California Land Stewardship Institute. The project to which this category 1 planning project relates to is eligible for category 2 funding, should it make it to the category 2 stage. The awarding of a category 1 grant for a project does not guarantee that a category 2 grant will be awarded for the same project.

This project will take place, in part, outside of the legal Delta. Public Resources Code section 32360.5 requires the Board make certain findings if it approves funding for activities outside the Delta. Staff recommends making the following findings: (1) the project implements the ecosystem goals of the Delta Plan by improving water quality and encouraging wildlife-friendly farming; (2) the project is a Category 1 planning project and therefore does not require any state or federal permits at this time; (3) the Conservancy has given notice to affected local jurisdictions and has received no comments, and staff will work with the applicant to address any comments received from the Delta Protection Commission prior to entering into a grant agreement; (4) there is no State conservancy covering Suisun Creek and Putah Creek, the locations where the project is proposing to

work outside the Delta, and (5) the project will provide significant benefits to water quality and agricultural sustainability in the Delta.

This certification program is a planning project that will advance implementation of Best Management Practices (BMPs) on private agricultural land that will lead to water quality improvements in the Delta. The Fish Friendly Farming (FFF) program uses science-based assessment and management methods that provide for an effective program to improve water quality, enhance habitat, and preserve agriculture. The applicant has reached out to landowners and identified at least one who has expressed interest in enrolling 650 acres in the program once BMPs have been developed, thus linking this planning project to capital outlay associated with agricultural sustainability and water quality improvement in Delta waterbodies. The collaborative approach employed by FFF is already successful in Napa, Sonoma, Mendocino, and El Dorado counties, both in terms of its adoption by private landowners, and its positive impact on water quality. Through this project, the applicant will develop the Best Management Practices and Farm Plan Template needed to adapt the Fish Friendly Farming program to cover crops currently grown in the Delta, conduct outreach and facilitate involvement of growers and agricultural organizations, and enroll sites for implementation of the program.

This proposal is consistent with the multiple state priorities to protect the beneficial uses of water, achieve the co-equal goals for the Delta, as well as manage and prepare for dry periods. The Delta is listed in the Federal Clean Water Act, section 303(d) for multiple impairments of water quality related to agriculture. The state and federal practice for addressing water quality impairments is the use of BMPs, which must be implemented in the Delta. The applicant has identified a plan and has the expertise to use best available science and grower feedback to tailor BMPs that are practical and impactful in the Delta. Climate change is expected to impact California water supply by impacting flow and exacerbating impairments. The FFF program addresses both issues through development of BMPs expected to alleviate impacts of drought and to conserve water.

Having successfully implemented the FFF program and multiple related projects in nearby watersheds, the applicant is leveraging existing processes and expertise and is ready to proceed right away to adapt the program for the Delta. The applicant demonstrates strong local support for both existing FFF programs and for initiating the program in the Delta. Involving the grower community in the development of the FFF certification program and garnering further local support are main elements of this planning project.

The California Land Stewardship Institute has strong collaborative relationships with private landowners and farmers, and has built a reputation for success in working with private landowners to improve habitat and water quality. The FFF certification is widely recognized by the National Oceanic and Atmospheric Administration, the State Water Resources Control Board, and the California Department of Fish & Wildlife as an effective method to cooperatively implement water quality and habitat improvements on agricultural plans. While the grower support necessary for a successful implementation of a Category 2 project cannot be guaranteed, the applicant has identified the appropriate partners and a fitting approach, and has the qualifications and experience necessary for this project to be a success and lead to measurable benefits in water quality.

Staff has prepared the text and tables below based on staff's best understanding of the information provided in the application. The Conservancy has received comments on the proposal from the Delta Stewardship Council and the Delta Protection Commission. If approved, staff will work with the applicant to further refine the project's scope of work and performance measures, and to address comments prior to entering into a grant agreement.

III. Project Summary

Project Description:

The Fish Friendly Farming Certification Program invites voluntary participation of landowners who will help reduce nonpoint source pollution by implementing Best Management Practices on their farms. Proposed project activities include: collecting information on crop types, chemicals used, integrated pest management (IPM) methods and water quality data in the Delta; coordinating with agricultural organizations and forming an Advisory Committee; coordinating with agricultural and water quality professionals; developing a BMP workbook for the Delta; developing a Farm Conservation Plan template; working with growers to field test the draft program and revise it to address grower comments; and initiating grower signups to obtain FFF certification.

It is well substantiated that water quality in the Delta is affected by numerous dispersed sources, including agricultural runoff. Agricultural lands actively apply organophosphate as well as nitrogen fertilizers. These substances can reach surface water through drift during application, return irrigation flows, pumping to manage island water levels, and stormwater runoff. Agricultural soils also harbor legacy organochloride pesticides which bind to clay particles. Soil erosion or pumping of turbid water can transport these pesticides into waterways. Pollutants also leach into groundwater or enter through unbermed wells. All of these pathways will be evaluated as part of the development of the FFF program.

Development of the FFF program for the Delta will follow a series of steps and analyses that include the use of best-available science and information. The applicant has identified robust information sources and the appropriate agencies and organizations to collaborate with for gathering information regarding current cultivation practices, water management, and pesticide and fertilizer use in the Delta. These analyses will provide the basis for the inventory/assessment in the Farm Plan template as well as the basis for the Best Management Practices of the FFF program. These BMPs will include soil erosion control measures such as filter strips or buffers, dust control, cover crops, reduced tillage; drainage and irrigation measures such as reduced flood irrigation and increased use of soil moisture monitoring systems to reduce the frequency and volume of irrigation; low flow sprinklers and drip irrigation to reduce the need to discharge return flows, use of settling basins to remove soil particles from return flows; chemical reduction measures such as integrated pest management (IPM) for each major crop to reduce the use of broad-spectrum pesticides and increase the use of natural enemy insects; more precise application methods to avoid drift of pesticides; relocation of mix and load sites away from wells and surface water channels; and restrictions on use of certain chemicals known to leach in to groundwater. Additional BMPs will address soil and water conservation practices, invasive

species control, native plant revegetation, field road erosion control, protection of wells from contaminant runoff, fertilizer type, application methods and quantities used.

Through this project, the applicant will play an important role in liaising between growers and agricultural and water quality professionals to identify BMPs that are most effective and practical for making measurable changes in water quality in the Delta. The project proponent will reach out to UC Cooperative Extension farm advisors, the Nature Resources Conservation Service, Agricultural Commissioners, Central Valley Regional Water Quality Control Board staff, Irrigated Lands Water Quality coalitions, Resource Conservation Districts and local Pest Control Advisors to discuss the program, cultivation methods and chemicals used for major crops, chemical and fertilizer application methods, and water quality monitoring.

While the applicant has completed similar projects in nearby regions, the applicant is cognizant that grower participation in the Delta is a unique challenge. The proposal demonstrates that one farmer is interested in implementing the FFF program on 650 acres of land as soon as the planning phase is complete. The applicant will work through entities, such as county Farm Bureaus and Agricultural Commission, with an established history of working with growers. The applicant will investigate how FFF certification may aid the grower in fulfilling other regulatory requirements, which has been done in other regions, as well as bring in growers from other regions to share their successes in how this program has benefited them.

Location (Site Description):

This planning grant will cover agricultural lands in the legal Delta as well as the floodplains of Suisun Creek and Putah Creek, which drain into the Yolo Bypass and Suisun Marsh. The project will include growers along Cache and Lindsey Sloughs, which drain into the Cache Slough, a priority restoration area.

IV. Implementation of California Water Action Plan and Consistency with Prop 1 and Conservancy Enabling Legislation

State Priority/Plan	Action	Project Benefits
Proposition 1	Ch. 6 79732(a)(1) Protect and increase the economic benefits arising from healthy watersheds, fishery resources, and instream flow.	Improves water quality and reduces further impairments; protects valuable ecosystem services that provide economic benefits to society.

State Priority/Plan	Action	Project Benefits
Proposition 1	Ch. 6 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.	Reduces pesticide load and nutrient runoff entering Delta waterways and improves water quality, a critical component of protecting and restoring Delta ecosystems.
	Ch. 6 79732(a)(11) Reduce pollution or contamination of rivers, lakes, streams, or coastal waters, prevent and remediate mercury contamination from legacy mines, and protect or restore natural system functions that contribute to water supply, water quality, or flood management.	Reduces agricultural pollutants that currently contribute to Delta waterbody contamination.
California Water Action Plan	Action 3. Achieve the Coequal goals for the Delta.	Improves water quality, an essential component of achieving the coequal goals for the Delta as improved water quality is necessary for supporting a healthy ecosystem and the multiple beneficial uses of water in the Delta.
	Action 4. Protect and Restore Important Ecosystems.	Reduces pesticide load and nutrient runoff entering Delta waterways and improves water quality, a critical component of protecting and restoring Delta ecosystems.
	Action 5. Prepare and Manage for Dry Periods.	Develops BMPs that address drought preparedness and water conservation, which will assist landowners in preparing and managing for dry periods.
Conservancy's Enabling Legislation	§32322(b)(2) Protect and preserve Delta agriculture and working landscapes.	Addresses sources of water quality degradation while working collaboratively with farmers to make them more sustainable.
	§32322(b)(6) Protect and improve water quality.	Reduces pesticide load and nutrient runoff entering Delta waterways by creating crop specific BMPs for the Delta.

State Priority/Plan	Action	Project Benefits
Conservancy's Strategic Plan	Objective 1.3. Aid in protecting and improving water quality to protect the Delta ecosystem and economy. Strategy 1.3.1: Adopt policies, including restoration criteria, and support projects that contribute to Delta water quality conditions that support the Conservancy's mission.	Reduces pesticide load and nutrient runoff entering Delta waterways by creating crop specific BMPs for the Delta.
Delta Plan	WQ R1. Protect Beneficial Uses.	BMPs are a well-established method for improving water quality.
	DP R10. Encourage Wildlife-friendly Farming.	BMPs promote wildlife-friendly farming practices which have benefits for both the ecosystem and agricultural operations.

V. Outcomes/Outputs

Project Goals	Desired Project Outcomes	Output Indicators
Goal 1. Increase the ability of agricultural operations to improve Delta water quality.	Completed FFF program for the Delta.	Development of BMPs for the Delta FFF Program. Development of the Farm Plan Template for the Delta FFF Program. 50 growers in support of the FFF project.
Goal 2. Support and sustain agriculture in the Delta.	Growers involved in the FFF program development and signing up for the implementation phase.	Growers and agricultural organizations attending Advisory Committee meetings.

VI. Budget

The total project cost is \$134,175, of which the applicant is requesting \$89,450 from the Conservancy and providing \$44,725 in cost-share. Cost share includes \$22,362.50 in cash and \$22,362.50 derived from in-kind services provided by the applicant, California Land Stewardship Institute.

VII. Consistency with Grant Program Guidelines

Readiness (Including CEQA Status if Applicable):

Having successfully completed multiple projects in nearby watersheds, the applicant is leveraging their existing protocol and process and applying it in a new area. The applicant is ready to proceed with program development; no permits are needed at this stage of the project. The project is within the Central Valley Flood Protection Board's jurisdiction pursuant to Title 23, California Code of Regulations Section 112 and implementation of BMPs at specific sites may require encroachment or other environmental permits prior to project construction. The requested funding will not be used to install BMPs. Award of the planning grant is not a "project" for purposes of CEQA.

Local Support:

The applicant demonstrates strong local support for both existing FFF programs and for initiating the program in the Delta. The applicant has consulted with the Delta Protection Commission. The applicant did not provide a County resolution. However, five letters of support are included from one state senator, one federal agency, one local NGO, one local district, and from the landowner interested in signing up for the FFF program once it is in place. The applicant states that the California Farm Bureau is supportive of this project moving forward.

Community involvement and collaboration are a main element of this planning proposal and therefore growing local support is a main element of this project. Project tasks include transferring the applicant's extensive work with Farm Bureaus in other counties to the Delta. The applicant includes collaboration with grower groups, agricultural commissioners, water quality coalitions, local water and reclamation districts, and others as a substantial element of the project. The project is consistent with surrounding land use and promotes sustainable farming.

Scientific Merit:

The scientific merit of using BMPs to improve water quality is well established, as is the impairment of Delta waterbodies by agricultural chemicals. The applicant included authoritative sources of literature to substantiate the scientific basis for this project. A wide variety of State and federal agencies mandate the use of BMPs for addressing water quality impairments. Many different entities have described BMPs to improve water quality. The applicant proposes to evaluate these existing BMPs and adapt them to the Delta to ensure that they are practical and effective in this region.

Long Term Management & Adaptive Management Plan:

The FFF program employs a long term management approach by requiring re-certifications every 5 years.

Monitoring and Assessment:

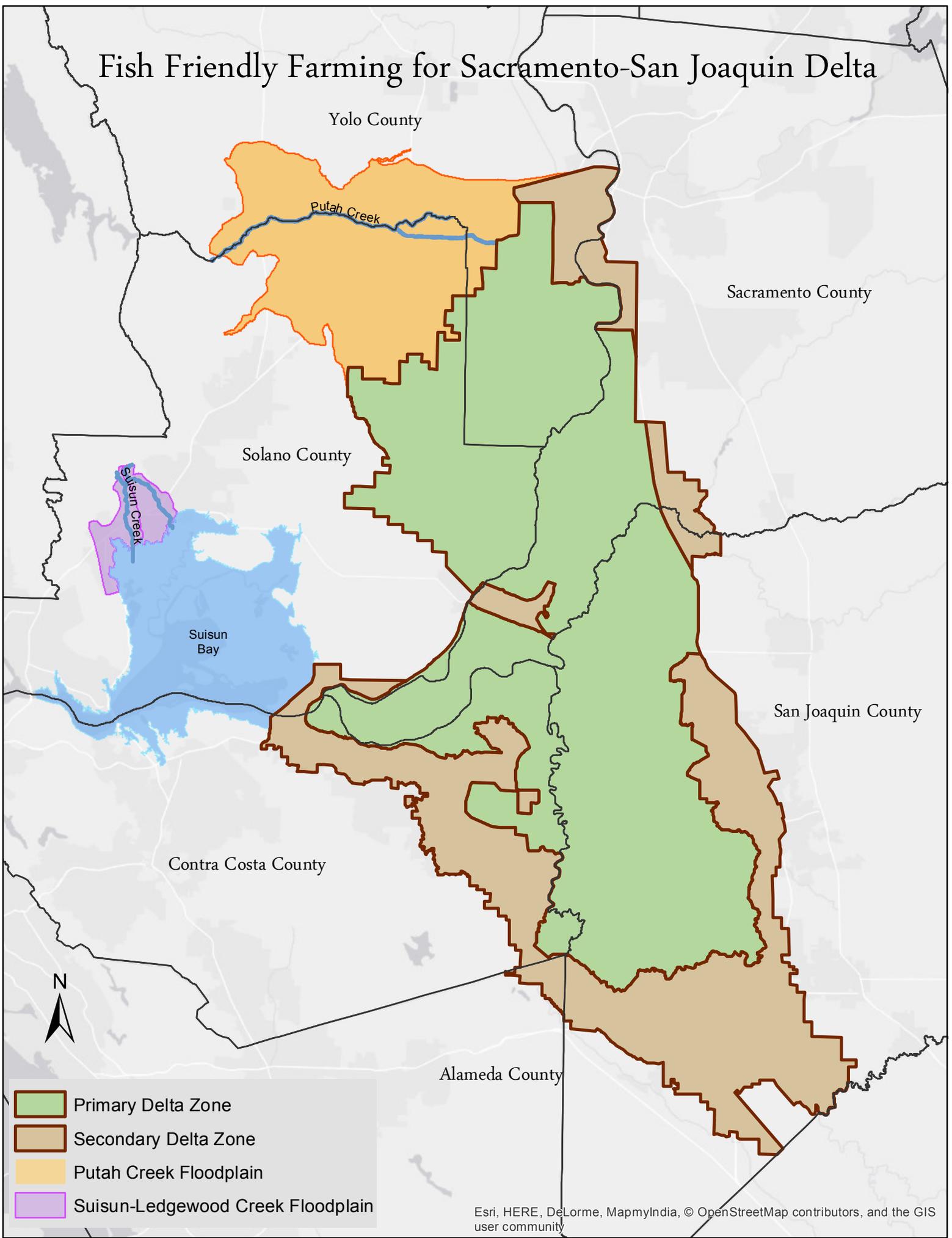
The FFF program is being designed so that, at full scale implementation, the program will result in an improvement of long-term water quality trends as measured by regional monitoring programs over time. For this planning project, the project proponent intends to

monitor participation in the Advisory Committee and the rate of initial sign ups to assess the success of the planning effort.

Climate Change Considerations:

The FFF program will address adaptation of agricultural production to a changing climate. Climate change predictions for California include longer, more extreme droughts, during which water for irrigation may be limited. During these future drought periods, growers will need to precisely apply water for crops by using soil moisture meter systems, low flow sprinklers, and drip irrigation and other technologies. The FFF program will include a series of measures to reduce overall irrigation water use and use more precise water application methods.

Fish Friendly Farming for Sacramento-San Joaquin Delta



-  Primary Delta Zone
-  Secondary Delta Zone
-  Putah Creek Floodplain
-  Suisun-Ledgewood Creek Floodplain