



## Proposition 1 Grant Program

### 2016-17 Staff Recommendation

#### I. Project Overview

<b>Project Title</b>	Restoration of Priority Freshwater Wetlands for Endangered Species at the Cosumnes River Preserve		
<b>Applicant</b>	Sacramento County Regional Parks		
<b>Project Number</b>	Prop 1-1608		
<b>Category</b>	2	<b>Funding Request</b>	\$942,631.40
<b>County</b>	Sacramento	<b>Total Project Cost</b>	\$1,182,444.20
<b>Score</b>	80.8	<b>Funding Recommended</b>	\$942,631.40
<b>Staff Recommendation</b>	<p>Approve findings for projects located outside of the Delta and reserve funds pending CEQA submittal and review.</p> <p>Approve the following conditions that will apply if the project is subsequently approved:</p> <p>(1) submittal of proof and verification of adequate water rights; and</p> <p>(2) a revised budget.</p>		

#### II. Staff Recommendations

Delta Conservancy staff recommends that the Board reserve funds for the Restoration of Priority Freshwater Wetlands for Endangered Species at the Cosumnes River Preserve project (#Prop 1-1608) proposed by Sacramento County Regional Parks (County) to allow the application to complete the California Environmental Quality Act (CEQA) process and pursue Board approval of the Responsible Agency findings. Reserving funds does not constitute approval of funding for the project and the Board reserves the discretion to approve or reject the funding request. It is expected that the environmental document and lead agency findings will be completed by September 2017.

Staff recommends that the Board approve findings for projects located outside of the Delta and conditions that will apply if the project is subsequently approved after the completion of the CEQA process. Approval of funds will be conditional upon the submittal and approval, by September 2017, of:

- (1) proof and verification of adequate water rights; and
- (2) a revised budget that addresses the clarifications noted in the budget section, below.

This project will take place 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, managing invasive species, and providing habitat for migratory species; (2) the project is consistent with the required state and federal permits, although some of these permits have not yet been obtained; (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 the location of the project; and (5)

the project will provide significant benefits to water quality, migratory species, and invasive species control in the Delta.

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 Restoration of Priority Freshwater Wetlands for Endangered Species at the Cosumnes River Preserve project will restore 110 acres of priority wetlands and oak woodlands owned by Sacramento County and located approximately five miles upstream from the legal Delta boundary. The project will immediately benefit the state and federally-listed threatened Giant Garter Snake and state-listed threatened and state fully protected Greater Sandhill Crane, as well as many other species of special concern and federal-trust species of resident and migratory waterbirds. 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 proposed project will restore the hydrologic function and condition of Horseshoe Lake at the Cosumnes River Preserve (Preserve) by using heavy equipment to remove invasive Uruguayan water primrose and its associated biomass and sediments, followed by aquatic herbicide applications for long-term primrose control. Water primrose is a highly invasive aquatic weed that currently dominates part of Badger Creek to the extent that it excludes habitat benefits to target species. Removing primrose will increase local water storage capacity which will contribute to recharging both shallow and deep groundwater supplies. It will also benefit Chinook salmon and the germination and growth of valley oak trees (which sequester large amounts of carbon). The project goals are to: 1) Contribute to the survival of both listed and non-listed species by providing perennial water with adequate aquatic prey in Horseshoe Lake; and 2) Restore local water storage capacity along the Cosumnes River to help recharge shallow perched water and deep aquifers, which may, in turn, help river flows to reconnect earlier in the fall/winter for migrating Chinook salmon, while also curbing the need for drilling bigger and deeper water wells that could further exacerbate water problems in the lower Cosumnes River watershed and the downstream Delta. The project adequately considers and accounts for climate change by removing an invasive weed that flourishes, in part, in response to climate change, and by incorporating measures that may increase soil carbon.

This project will be implemented in part by Sacramento County (the applicant), which is a partner on the Preserve's Cooperative Management Agreement along with eight other public and private entities. The County has been a Preserve partner for more than 20 years, providing staff and financial resources to accomplish the Preserve's mission. The County has received numerous state and federal grants in the past. Other key partners include the Bureau of Land Management's Preserve Manager who will serve as the Project Manager, and who has 10 years of experience managing and restoring wetlands at the Preserve; Ducks Unlimited, Inc., which has conserved more than 12 million acres of wetlands in the U.S., Canada and Mexico; Swaim Biological, Inc., a woman-owned business that for the past 22 years has prepared mitigation and monitoring plans, habitat management and restoration plans, and developed take avoidance measures for special status reptile and amphibian species throughout California; and Four M Contracting, Inc. which has completed wetland creation and restoration projects for a wide range of government and non-government entities.

**Location & Site Description:** The project is located at Horseshoe Lake on Badger Creek, approximately five miles outside the legal Delta. The site is four miles north of Galt, in Sacramento County, California. The project site is currently in wetland habitat that is congested with invasive water primrose. See Attachment 1 for a project location map.

**Consistency with State Priorities:** The benefits of the Restoration of Priority Freshwater Wetlands for Endangered Species at the Cosumnes River Preserve 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.

Prop. 1

- 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.
- Section 79732(a)(7): Collaborate with federal agencies in the protection of fish native to California and wetlands in the central valley of California.
- Section 79732(a)(12): Assist in the recovery of endangered, threatened, or migratory species by improving watershed health, instream flows, fish passage, coastal or inland wetland restoration, or other means, such as natural community conservation plan and habitat conservation plan implementation.

California Water Action Plan

- Action 3: Achieve the Coequal Goals for the Delta.
- Action 4: Protect and Restore Important Ecosystems.
- Action 6: Expand Water Storage Capacity and Improve Groundwater Management.

Delta Conservancy's enabling legislation

- Section 32300(i):
  - (1) Protect and enhance habitat and habitat restoration.
  - (6) Protect and Improve water quality.

Delta Conservancy's Strategic Plan

- 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.
  - Objective 3.2: Lead Delta ecosystem restoration activities consistent with Conservancy authorities, the Delta Plan, and other regional plans and guidance, through a voluntary Delta Restoration Network, and based on adaptive management.

Delta Plan

- ER P2: Restore habitats at appropriate elevations.
- ER R2: Prioritize and implement projects that restore Delta habitats.
- ER P5: Avoid introduction of and habitat improvements for invasive nonnative species.
- ER R7: Prioritize and implement actions to control nonnative invasive species.

**Budget:** The applicant is requesting \$942,631.40 from the Delta Conservancy in Proposition 1 funds. The total cost of the project is \$1,182,444.20. The applicant is contributing \$51,000 (\$30,000 cash, \$21,000 in-kind) to the project. Additionally, the U.S. Bureau of Land Management (BLM) is contributing \$178,987.80 (\$85,000 cash, \$93,987.80 in-kind), and the U.S. Fish and Wildlife Service (USFWS) is contributing \$9,825.00 (all cash) to complete funding for the project.

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

- A revised budget that identifies funding for reporting, as required by the Grant Guidelines.

**Readiness:** Sacramento County and U.S. Bureau of Land Management staff previously prepared a joint NEPA-CEQA document for the 2015 Horseshoe Lake and Bjelland Unit projects, a nearby 3.5 acre pond that was

restored, so approximately 75% of the NEPA-CEQA compliance document is already completed for the project. Sacramento County will act as the Lead Agency for this project's CEQA process, and work has already begun to update the existing NEPA-CEQA documents, with an estimated completion date of September 30, 2017. Once the CEQA documentation is complete and the lead agency has made its findings, the Conservancy will review the document and the lead agency's findings and, upon making its own responsible agency findings, either approve or deny the funding request for this project. Upon confirmation of funding from the Conservancy, BLM will secure the remaining permits on behalf of the County. All permits are currently in progress, and the County anticipates that all permits and compliance requirements will be fulfilled by June 30, 2018, three months prior to the proposed start of construction. Topographic surveys and preliminary engineering drawings for the project site design are complete, and pre-project baseline monitoring is underway.

The applicant did not submit adequate information for the Delta Watermaster to review its water rights. The applicant must submit a License Number or Statement of Water Diversion and Use that will be reviewed by the Delta Watermaster and Delta Conservancy staff. Staff recommends approval of the project that is conditional upon submission of this information and a determination that adequate water rights exist to support the project.

**Long Term Management & Maintenance:** The project site will be maintained by U.S. Bureau of Land Management according to the Long-term Management and Maintenance Plan which specifies that the natural and cultural resources on the property will be maintained at or above their current level, and that adaptive management will be used to inform decisions about the management of the property. BLM has managed Sacramento County Preserve lands, including those at the Cosumnes River Preserve, for nearly 20 years under the BLM-Sacramento County Management Agreement. The applicant will be required to enter into a landowner access agreement as a condition of the Delta Conservancy's grant agreement.

#### 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 proposed project to remove and control Uruguayan water primrose to restore the hydrologic function and condition of the Preserve's Horseshoe Lake is based on information obtained from scientific literature, researchers, and land managers about Uruguayan water primrose. Information also was collected from technical reports prepared specifically for the Preserve detailing the hydrological conditions in Badger Creek, a similar site near-by; scientific literature and professional expertise about the life history of the focal wildlife species; and years of applied, land management experience by Preserve staff and others that have implemented wetland restoration and management, Integrated Pest Management, and research in the Badger Creek watershed where primrose has been an issue. The Badger Creek Giant Garter Snake population is the umbrella species for the project because it is a highly aquatic species dependent on freshwater wetlands for its survival. In and around the Delta there are two known populations of Giant Garter Snakes, the Badger Creek population, located outside of the legal Delta, and the White Slough population, located inside of the legal Delta boundary. The White Slough population is at extreme risk of extinction due flooding, sea level rise, and saltwater intrusion further upstream in the Delta as a result of climate change. Increasing the Giant Garter Snake population at the project site will increase the numbers of possible dispersing snakes downstream in the Delta, and it will provide more snakes that can be captured and relocated to other parts of their historic range, making the Badger Creek population's significance to the survival of the species immeasurable.

The County of Sacramento completed an Adaptive Management Plan for this project in January of 2017. The plan conforms to the Delta Plan's Adaptive Management framework. The defined problem predicts that the removal of water primrose and the planting of native vegetation will benefit numerous federally and state listed species as well as several species of special concern. Data on the extent of water primrose and population data on target species will inform adaptive management during implementation. The project team

members will, at minimum, 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, excerpted 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

- A total of approximately 30 acres of open-water wetland habitat will be restored.
- Between 30-50% of the total 110-acre Horseshoe Lake surface area is maintained as perennial or seasonal open-water wetland habitat throughout the year.
- Approximately 10 acres of upland habitat will be enhanced to support wintering Giant Garter Snakes within the Badger Creek watershed.
- Plant and maintain valley oak tree seedlings along approximately 1 mile of the eastern edge of Horseshoe Lake.

### Outcomes

- The deepest 10 acres of the restored 30-acre open-water wetland will retain water of sufficient quality and quantity to support aquatic prey and wildlife species by June 2020.
- Small fish, frogs, tadpoles, and aquatic invertebrates will have higher rates of occurrence in the restored 30-acre, open-water wetland habitat relative to baseline conditions by June 2020.
- Giant Garter Snakes will have repatriated the Horseshoe Lake and/or upstream reaches of Badger Creek east of Highway 99 naturally by moving upstream from the Preserve's Snake Marsh, located on the west side of Highway 99 by June 2020.
- Waterfowl and waterbird abundance, richness, and distribution of waterfowl and waterbird species present within Horseshoe Lake will have increased in response to restoration by June 2020.

The project's monitoring and assessment will focus on collecting data that will: 1) detect changes in the Badger Creek watershed that may have an effect on Horseshoe Lake in the short or long term; and 2) detect both positive and negative responses in Horseshoe Lake's habitat and species to the proposed restoration and management actions. These parameters will be addressed through Giant Garter Snake surveys conducted following USFWS protocols prior to and after the earthmoving work; waterfowl and waterbird, nesting bird, and raptor surveys; and hydrological and water quality monitoring including monitoring of water depth, temperature, DO and pH. Valley oak tree seedling success will be monitored via direct observation and measurement during maintenance activities (i.e., watering, weeding, etc.). The targeted success rate is 75% or greater tree survival after the third year. Relevant information will be uploaded into agency-specific platforms like the National Invasive Species Information and Monitoring System. Data, analyses and conclusions may be submitted to peer-reviewed scientific journals for consideration after the completion of the project and the article submissions. Monitoring and assessment plans may be revised as a condition of the grant agreement.

## **V. Local Support**

The Project team has been actively coordinating with all affected local agencies to discuss issues of mutual interest. A resolution from the Sacramento County Board of Supervisors supporting the project has been included in the proposal package. The proposal includes 12 letters of support from federal agencies, local municipalities and districts, non-profit organizations, and surrounding landowners.

# Attachment 1: Project Location Map

