

July 7, 2023

Ulatis Creek Habitat Restoration Project

Consistency with the Delta Plan: explanation of Project consistency with Delta Plan regulatory policies

1. Coequal goals

N/A – this project is consistent with all policies of the Delta Plan.

2. Mitigation Measures

Solano RCD has reviewed the mitigation measures incorporated into the Delta Plan and believes that: a) the Best Management Practices and Mitigation Measures incorporated in the IS/MND are equally or more effective than those found in the Delta Plan, and b) all potentially significant impacts will be avoided or reduced to less-than-significant levels by mitigation measures identified in the IS/MND.

The following mitigation measures, detailed in the IS/MND for this Project, will be implemented by Solano RCD to avoid or minimize potential environmental impacts. Implementation of these mitigation measures will reduce the potential environmental impacts of the proposed project to a less-than-significant level.

Mitigation Measures for Biological Resources

BIO 1. Pre-construction Surveys. A qualified biologist shall conduct wildlife surveys including burrow surveys prior to 1) the use of mechanical equipment that disturbs the ground (augering, trenching), 2) Arundo biomass removal, or 3) mowing activities. Specific mitigation measures for GGS (giant garter snake) and nesting birds are listed below.

BIO 2. Protection of Listed Species. If a burrow is found during surveys or a fully protected or listed animal species is encountered while performing work, all work shall be suspended within 10 feet of the burrow or until the fully protected or listed animal species has left the work area. The appropriate agencies shall be notified of all confirmed observations of any fully protected or listed species in or adjacent to any work area for the project. The qualified biologist will report any take of listed species to the appropriate agencies (USFWS/CDFW) immediately by telephone and by electronic mail or written letter within one (1) working day of the incident.

BIO 3. Worker Environmental Awareness Training. A Worker Environmental Awareness Training Program for personnel shall be conducted by a qualified biologist for all workers on restoration sites, including sub-contractors, prior to the commencement of restoration activities. The program shall consist of a presentation made by a qualified biologist that includes information about the distribution and habitat needs of any special status species that may be present, legal protections for those species, penalties for violations, and project-specific protective measures included in this document.

BIO 4. Giant Garter Snake Surveys and Avoidance. During the GGS active season (May 1 – October 1), a qualified biologist shall conduct GGS surveys 24 hours prior to: 1) the use of mechanical equipment that disturbs the ground (augering, trenching), 2) Arundo biomass removal, or 3) mowing activities. Surveys will be repeated whenever 15+ days elapse without work at the site. If GGS are encountered during construction activities, construction crew shall immediately notify the qualified biologist who will then immediately notify CDFW/USFWS to determine the appropriate procedures related to the collection and relocation of the snake. A report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the snake, within one (1) business day.

BIO 5. Ground Disturbance Work Window. Ground disturbing activities (augering, trenching) will only be conducted during the GGS's active season between May 1 through October 1. Non-ground disturbing work will continue into the snake's inactive season. Work activities during the active season will be continuous and are likely to deter GGS from using locations within the project area as brumation sites during the GGS inactive season.

BIO 6. Nesting Bird Surveys and Avoidance. During the nesting season (February 1-August 31) and through September 15 for Swainson's hawk, a qualified biologist shall conduct surveys for nesting birds for two survey periods prior to Project commencement and also 24 hours prior to: 1) the use of mechanical equipment that disturbs the ground (augering, trenching), 2) Arundo biomass removal, or 3) mowing activities. Surveys will be repeated whenever 7 or more days elapse without work at the site. If nests are located, impacts shall be minimized by establishing appropriate non-disturbance buffer zones in consultation with CDFW/USFWS. The qualified biologist shall monitor nests to ensure that nesting birds are not disturbed and nests are not jeopardized.

BIO 7. Native Plant Survey and Avoidance. A qualified biologist shall conduct surveys during the appropriate blooming period for all special-status plants that have the potential to occur on or adjacent to the Project area prior to the start of ground-disturbing activities and prepare a report documenting survey findings. If special-status plants are found during surveys, the Project shall be re-designed to avoid direct and indirect impacts to special-status plants. The qualified biologist shall be knowledgeable about plant taxonomy, familiar with plants of the region, and have experience conducting botanical field surveys according to vetted protocols.

BIO 8. Elderberry Survey and Avoidance. A qualified biologist shall conduct surveys for elderberries prior to restoration activities. All identified elderberries shall be flagged, and measures developed by USFWS (2017) to avoid and minimize impacts to VELB will be implemented, including: elderberry branches will not be pruned or trimmed, ground disturbing activities will be avoided within 20 feet of elderberry shrubs, and herbicides & mechanical weed control will not be used within the dripline of the elderberry shrubs.

BIO 9. Equipment Operation Speeds. Construction crews shall operate vehicles on the levee roads accessing the site at 15mph or less. Construction crews shall operate equipment used within the footprint of the project site (ATVs, mowers, skid steer bobcat, pickup trucks) at 5mph hour or less.

Mitigation Measures for Cultural Resources

CUL 1. Worker Cultural Resources Training. A Worker Cultural Resources Training Program shall be conducted for all workers prior to the commencement of restoration activities. The program shall

include information about how to recognize cultural resources, legal protections for those resources, and appropriate steps to take if cultural resources are discovered during implementation of restoration activities.

CUL 2. Human Remains Discovered. In the event human remains are found during project construction, such remains are subject to the provisions of California Public Resources Health and Safety Code Section 7050.5-7055. The required procedures will be implemented, including immediately stopping work within 100 feet of the find and promptly notifying the County Coroner/Medical Examiner, as well as all project partners with regulatory responsibilities. If the remains are determined to be Native American by the County Coroner/Medical Examiner, the NAHC will designate of the Most Likely Descendant (MLD) per California Public Resources Code (PRC) Section 5097.98.

Work within 100 feet of the find will restart only after the remains have been investigated, appropriate recommendations have been made by the MLD for the treatment and disposition of the remains, and the landowner has agreed to adhere to those recommendations to the satisfaction of project partners with regulatory responsibilities. As provided for by California Government Code Section 6254(r), the location of human remains is protected from any type of public disclosure.

CUL 3. Archaeological/Paleontological Resources Discovered. If historical or unique archaeological or paleontological resources are discovered during restoration activities, all work will stop within 100 feet of the find, and provisions will be made for a qualified archaeologist to immediately evaluate the find. Work may continue on other parts of the project while evaluation and mitigation take place (CEQA Guidelines §15064.5 [f]). If the find is determined to be an historical or unique archaeological or paleontological resource, time will be allotted to allow for implementation of avoidance measures or appropriate mitigation measure as determined through consultation with local tribes and other project partners with regulatory responsibilities.

As appropriate, and in consultation with the landowner, treatment of identified archaeological resources may include archaeological excavations by qualified archaeologists, analysis of artifacts and other constituents, and evaluation of the resource's significance. This work will incorporate tribal religious beliefs, customs, and practices as determined through consultation with local tribes, and will be guided by the *San Francisco Bay-Delta Regional Context and Research Design for Native American Archaeological Resources* (Byrd et al 2017).

Mitigation Measures for Hydrology/Water Quality

WQ1. To reduce the chance of accidental overspray of herbicide into Ulatis Creek during control of invasive weeds, herbicide spraying will not be conducted within 10 feet of the water's edge.

3. Best Available Science

This habitat restoration Project is an implementation project with the goal of installing native wildlife habitat; it is not a scientific research project with data collection goals. However, Solano RCD staff and their partner/contractor on the project, Point Blue Conservation Science, will collect avian and plant monitoring data pre- and post- project installation (see monitoring table in Section 4: Adaptive Management). This data will be uploaded to EcoAtlas.

Solano RCD and Point Blue staff have extensive practical and academic experience in this work, including the use of peer-reviewed literature to inform project activities. Habitat restoration science is a dynamic field, and the best available science will be used to inform project implementation. Project design also incorporated well established best practices, such as the use of local stock for propagated plants whenever possible, establishment of a riparian habitat that is diverse in both species and canopy height, phenology and ecosystem function, and judicious eradication of highly invasive non-native plant species.

4. Adaptive Management

Solano RCD developed a 9-step Adaptive Management approach to Project installation, monitoring and maintenance:

PHASE 1: PLAN

1. Define Problem

After decades of use as rangeland, the proposed Project site currently lacks vegetative diversity and is dominated by non-native vegetation with limited habitat value.

2. Goals and Objectives

***Objective 1.** Restore 20 acres of riparian forest in the Delta to provide habitat for native wildlife.*

3. Linkages between objectives and proposed actions

A review of published scientific literature demonstrates well-documented links between our proposed actions and objective. This body of research suggests that actions to control highly invasive exotic weeds and establish native vegetation will achieve our objective.

PHASE 2: DO

4. Select Actions & Develop Performance Measures and 5. Design & Implement Actions

Objective 1 - Action: *Install 20 acres of native vegetation at the Project site.*

Design and implementation of restoration work will draw on decades of Solano RCD staff experience establishing native vegetation in working landscapes. All project plans will meet USDA-NRCS Conservation Practice Standards which represent “best industry practices” for sustainable agriculture and have a decades-long history of demonstrated success. Solano RCD will refine planting design by referencing locally-adapted species in the Ulatis Creek/Delta watershed.

6. Design and Implement Monitoring Plan

Outputs to assess Action *completion* are:

- Acres of plants established
- Records of total planted numbers of trees, shrubs, and plugs

Monitoring activities are detailed in the table below, and will inform project management.

Monitoring Activity	Spring 2023	Summer 2023	Winter 2023/24	Spring 2024	Summer 2024	Winter 2024/25	Spring 2025	Summer 2025	Winter 2025/26	Spring 2026	Summer 2026	Winter 2026/27	Spring 2027
Avian survey				X									X
Plant mortality, condition					X			X					
Photo-monitoring	X	X		X	X		X	X					
Plant diversity survey	X	X								X	X		
Special status species survey	X			X			X						

PHASE 3: EVALUATE AND RESPOND

7. Analyze, Synthesize, Evaluate

All data will be reviewed as collected and compared to baseline data; trends toward targets will be analyzed. Native and invasive plant survival, coverage, and condition data will be evaluated each growing season and taken into account as part of planning the subsequent planting and weed control season. An adaptive management approach will re-define problems if below-target establishment of natives or control of invasives is observed.

8. Communicate Understanding

Project results will be shared with NRCS, Point Blue Conservation Science, R. Emigh Livestock, and in a final report to the Delta Conservancy. To allow our data to inform a state-wide picture of environmental quality and restoration efforts, applicable data will be uploaded to EcoAtlas. Intensive vegetation management efforts during implementation will generate valuable recommendations. Noted weed-prone locations, problematic species and effective treatment methods will inform all future vegetation management activities.

9. Adapt to Challenges, Re-define Problem, Move Forward.

The defined problem predicts that the establishment of native vegetation will increase the quality and availability of wildlife habitat. However, avian monitoring data, a useful proxy for assessing wildlife habitat function, may demonstrate that plantings do not achieve targets as planned. If this is the case, site management beyond 2027 will maximize habitat suitability for birds and other wildlife, including alteration of the landowner’s existing Grazing Management Plan as necessary. Data on survival, diversity and plant condition will inform adaptive management during implementation. If monitoring results show a particular species failing to thrive in one area, or show areas with poor establishment across species, we will evaluate sub-site conditions of soil compaction, weed pressure, moisture, etc. Re-planting will be done with species proven successful in similar micro-site conditions. If poor establishment affects multiple species, we will adjust site preparation methods. Photo-monitoring and plant survival data will inform weed management. If weed competition threatens establishment targets, we will focus on problematic species at susceptible points in their life cycle. SRCD will continue to work with R. Emigh Livestock for at least as long as the Grant Term as they maintain Climate Beneficial certification with Fibershed and manage the site with targeted flash

grazing. These joint efforts will enable communication on new challenges that may arise and will inform management approaches over the long-term.

5. Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance

N/A – This is a habitat restoration Project that does not significantly change water use, water rights or water sales in the Delta. The landowner holds water rights to draw water from Ulatis Creek. Water is pumped from the creek into a large, on-farm irrigation ditch that is then used for ranching operations. This project will utilize two small, portable Honda water pumps to withdraw water from the irrigation ditch and irrigate the proposed plantings. We intend to provide all 1,740 trees and shrubs with water-efficient drip irrigation for three summers, which should result in a total use of approximately 700,000 gallons (about 2 acre feet) of water over the life of the project. This quantity of water use is very small compared to the amount of water used annually by R. Emigh Livestock to irrigate pasture and will not impact downstream users or surrounding landowners.

6. Transparency in Water Contracting

N/A – The Project does not alter any existing or future water contracts from the State Water Project or Central Valley Project.

7. Conservation Measure

N/A – The Project was not developed pursuant to a natural community conservation plan or a habitat conservation plan developed by a local government or CDFW.

8. Delta Flow Objectives

The Project will not substantially alter water flows in the Delta. The landowner holds water rights to draw water from Ulatis Creek. Water is pumped from the creek into a large, on-farm irrigation ditch that is then used for ranching operations. This project will utilize two small, portable Honda water pumps to withdraw water from the irrigation ditch and irrigate the proposed plantings. We intend to provide all 1,740 trees and shrubs with water-efficient drip irrigation for three summers, which should result in a total use of approximately 700,000 gallons (about 2 acre feet) of water over the life of the project. This quantity of water use is very small compared to the amount of water used annually by R. Emigh Livestock and will not impact downstream users or surrounding landowners.

9. Restore Habitats at Appropriate Elevations

The Project is located on a floodplain and will replace invasive non-native plants there with native riparian habitat, all appropriate to the current elevation and potential storm flows in the future that

include sea level rise. Based on DWR aerial topographic imagery, elevation at the site ranges from 9 to 12 feet above sea level (ASL) on the downstream end of the project site and 12 to 15 feet ASL on the upstream end of the project site; adjacent to the project site, the surface of Ulatis Creek sits at approximately 5 ft ASL (DWR 2007). In the Delta Plan, the National Research Council forecasts potential sea level rise as being two feet at the western end of Sherman Island and six to eight inches at Walnut Grove by 2050 (DSC 2020). Sea level rise at the Project site will be intermediate between these two levels, leaving the Project site above sea level rise during this time period except during flood events. The suite of native plants proposed for the site by the Project are adapted for seasonal flooding such as might be found in the sea level rise accommodation band and transitional habitat band as defined in the Delta Plan.

The Elevation Map in Appendix 4 shows that the Project site is well upstream and upland of any areas designated as significant to accommodate sea level rise.

10. Protect Opportunities to Restore Habitat

This is a habitat project that will create 20 acres of new native riparian habitat in the Delta, adding on to a previous project that installed 15 acres of native habitat at the site.

11. Expand Floodplains and Riparian Habitats in Levee Projects

This Project will install 20 acres of native riparian habitat on the water side of a levee. It will control highly invasive non-native plants, including *Arundo donax* and tall wheat grass (*Elymus ponticus*), and replace them with native trees, shrubs, grasses and forbs on an existing floodplain.

12. Avoid Introductions of and Habitat for Invasive Nonnative Species

One of the main goals of the Project is to control *Arundo donax*, a highly invasive weed, as well as other problematic weeds that could interfere with native plant establishment; four years of mechanical and herbicide weed control activities are described and constitute a large part of the project. The Project would remove invasive species and would not introduce new invasive species. The project will follow a framework of adaptive management to control any new highly invasive plant species recruiting to the site. It would not introduce or create better habitat for aquatic weeds or non-native fish because it will occur on an upland site, nor will the restoration of native vegetation improve habitat for invasive terrestrial species. No grading is proposed that would change the land surface elevation relative to the water surface elevation or change the inundation frequency of any part of the site. As the Project would not lead to introduction or facilitation of invasive species establishment, an invasive species management plan is not required under Delta Plan Mitigation Measure 4-1.

13. Locate New Urban Development Wisely

N/A – The Project does not involve any new Urban Development.

14. Respect Local Land Use When Siting Water or Flood Facilities or Restoring Habitats

The Project avoids conflicts with existing lands uses and those depicted in the Solano County General Plan because the site is currently zoned A-80 for agriculture and is designated in the Solano County General Plan as Agriculture with a Resource Conservation overlay. The site is used for agricultural purposes (grazing), and grazing will continue after plant establishment, as described on pages 22 and 51 of the IS/MND.

15. Prioritization of State Investments in Delta Levees and Risk Reduction

N/A - The Project does not involve any State funding allocated for levee improvement nor emergency preparedness.

16. Require Flood Protection for Residential Development in Rural Areas

N/A – The Project does not include any aspect of Residential Development.

17. Protect Floodways

The project will remove invasive non-native vegetation, including large plants such as *Arundo donax* and tall wheat grass (*Elymus ponticus*), and replace them with native trees and shrubs, on the water side of a levee. Some of the planting area is in a floodway. The potential effects of these plantings on flood elevations were analyzed via HEC-RAS modeling, and it was determined that the greatest increase in 100-yr flow event water surface elevation due to project conditions is 0.09 feet, which is considered an insignificant impact. In addition, the establishment of native understory and tree/shrub canopy on this floodway will significantly increase soil stability and reduce erosive soil loss during high flows, protecting the floodway and downstream areas from the impacts of storms.

18. Floodplain Protection

The project will remove invasive non-native vegetation, including large plants such as *Arundo donax* and tall wheat grass (*Elymus ponticus*), and replace them with native trees and shrubs, on the water side of a levee, all of which is in the 100-yr floodplain. The potential effects of these plantings on flood elevations were analyzed via HEC-RAS modeling, and it was determined that the greatest increase in 100-yr flow event water surface elevation due to project conditions is 0.09 feet, which is considered an insignificant impact. In addition, the establishment of native understory and tree/shrub canopy on this floodplain will significantly increase soil stability and reduce erosive soil loss during high flows, protecting the floodplain and downstream areas from the impacts of storms.