2 SUMMARY

2.1 INTRODUCTION

This document is a Draft EIR that has been prepared to evaluate the potential environmental effects of the Sacramento River-Chico Landing Subreach Habitat Restoration Project, which is proposed for implementation by TNC. It has been prepared under the direction of CBDA, which is the lead agency for CEQA compliance.

This summary is provided in accordance with State CEQA Guidelines Section 15123. As stated in Section 15123(a), "an EIR shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." Pursuant to the State CEQA Guidelines, this section includes: (1) a summary description of proposed project elements, (2) a synopsis of environmental impacts of the proposed project and recommended mitigation measures (in tabular form), (3) identification of the alternatives evaluated and of the environmentally superior alternative, and (4) a discussion of potential areas of controversy associated with the project.

2.2 SUMMARY OF PROPOSED PROJECT ELEMENTS

The SRNWR is composed of many units (properties) between the cities of Red Bluff and Princeton beginning at river mile (RM) 240 and ending at RM 164. The three project sites proposed for restoration occur within larger USFWS units within the SRNWR and are known by the names Pine Creek, Capay, and Dead Man's Reach. The proposed project would involve revegetation and restoration of native riparian habitat at project sites totaling approximately 836 acres with a combination of forest, savannah, and grassland habitats. To accomplish restoration, native riparian plant species would be planted and actively maintained for 3 years. Over time, habitat management and natural processes would control the species composition and overall structure of the plant communities. Most of the restoration work would occur between summer 2006 and fall 2009. Restoration contractors would be responsible for project site preparation, planting, and maintenance, activities that would be overseen by TNC. Proposed project activities would begin in summer 2006 and would generally include:

- removal of debris (including a declining almond orchard on Dead Man's Reach) from the three project sites followed by disking and removal of nonnative invasive species (weeds);
- applications of herbicides alternated with disking to a depth of 6–8 inches to control weeds;
- replacement or retrofitting of irrigation systems;
- layout of the site according to TNC site plans using a palette of approximately 30 native riparian plant species;
- plantings of potted stock and cover crops, willow and cottonwood cuttings, and an understory herbaceous (grasses and forbs) layer between fall 2006 and fall 2007;
- weekly, monthly, and annual monitoring by TNC staff over a 3-year period to evaluate relative success of plantings at the restored project sites; and
- submittal of annual reports documenting monitoring results to the USFWS for review in January 2007, 2008, and 2009.

Resulting data would be used to compare species growth across different restoration project sites. TNC requires an 80% overall average survival rate for plantings, as well as an 80% ground cover establishment criterion for

seeded understory forb and grass species. TNC provides restoration activity updates to the SRCA Forum Technical Advisory Committee and Board of Directors.

2.3 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

Table 2-1, "Summary of Impacts and Mitigation Measures" (included at the end of this chapter), provides a summary of the environmental impacts of the proposed habitat restoration project, the level of significance of each impact before mitigation, recommended mitigation measures, and the level of significance of each impact after implementation of the mitigation. As shown in Table 2-1, implementation of the proposed project could result in potentially significant impacts to undocumented or undiscovered prehistoric or historic archaeological resources during project implementation phases. These potential impacts would be mitigated to less than significant levels with implementation of Mitigation Measures 4.5-a and 4.5-b. The proposed project would restore some land used for agriculture to native riparian habitat, effectively removing it from agricultural production; however, this process would be neither irreversible nor cause serious degradation or elimination of the physical or natural conditions that provide the land's values for farming. In addition, the proposed project would provide several environmental benefits: re-establishment of fully functioning riparian ecosystems would benefit sensitive habitats, special-status plants, and wildlife species; restoring natural riparian areas would benefit Sacramento River system fisheries by increasing complexity of the aquatic environment and providing cover, food, and other habitat components. Furthermore, the proposed project would re-establish long-term processes and functions present in natural riparian communities, including the natural formation of soils that gave these lands their original agricultural value. Fully functioning riparian ecosystems are also known to improve groundwater and surface water quality by removing undesirable constituents such as nutrients and pesticides.

2.4 SUMMARY OF ALTERNATIVES

Guiding principles for an analysis of alternatives are provided by the State CEQA Guidelines Section 15126.6. In accordance with the State CEQA Guidelines, this Draft EIR evaluates the following three alternatives:

- Proposed project
- No project
- Passive restoration

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. The *proposed project* alternative is the environmentally superior alternative of the alternatives considered. Under this alternative, native plant species would be planted and actively maintained for 3 years to allow the planted vegetation to become established. The proposed project would achieve the project objectives to restore and enhance native riparian vegetation consistent with guidelines and public policy decisions for management of lands along the middle Sacramento River.

The *no project* alternative would not achieve the project objectives of restoring and enhancing native vegetation to increase habitat values for threatened and endangered species, songbirds, waterfowl and other migratory birds, anadromous fish, resident riparian wildlife, and plants. It would be inconsistent with joint federal/state guidelines and policies for management of resources along the middle reaches of the Sacramento River.

Under the *passive restoration* alternative, the project sites would not be actively restored and enhanced; agricultural activities would cease at the Capay and Dead Man's Reach project sites and the Pine Creek project site would remain fallow. This alternative would rely on natural recruitment from adjacent remnant riparian communities to recolonize the fallow project lands, and on current hydrological conditions to sustain establishing seedlings. The eventual increase in wildlife habitat value is likely to be lower than is expected with the proposed project alternative because it would likely include many nonnative and invasive species, and natural recruitment of native species is likely to be very low. Long-term observations indicate that passive restoration is an infeasible

alternative for the project sites because the project objectives cannot be accomplished in a successful manner within a reasonable period of time, if ever. Similar to the no project alternative, the passive restoration alternative would not achieve the objectives for management of lands within the SRNWR.

2.5 AREAS OF CONTROVERSY

CBDA issued an NOP on November 5, 2004, to inform agencies and the public of the preparation of an EIR on a proposed project to restore and enhance native riparian habitat on three project sites within the SRNWR. The purpose of the NOP was to solicit comments from public agencies and interested members of the public on issues germane to the proposed project that should be considered in the Draft EIR. CBDA received four comment letters on the NOP. CBDA also held a scoping meeting for the public and agencies on November 16, 2004. Comments were presented by individuals at the public scoping meeting. Appendix A of this Draft EIR contains a copy of the NOP, scoping meeting notes, and copies of comment letters received.

Implementation of the proposed project would involve re-establishing native riparian habitat on agricultural lands. Whether restoration of riparian habitat on lands that have more recently been in agricultural uses would result in significant environmental impacts has been an issue for discussion by the affected public and state and federal agencies. This issue is discussed in detail in Section 4.2 “Agricultural Resources and Land Uses.”

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.2 Agricultural Resources and Land Uses			
4.2-a. Change of Use From Agricultural Land to Restored Native Riparian Habitat. The nature of the proposed project is habitat restoration, an activity consistent with federal and state legislation regarding the Sacramento River environment. The project sites were acquired with public funds from willing sellers for the express purpose of restoring the riparian corridor and wildlife habitat along this dynamic reach of the Sacramento River. These activities are consistent with both the legislative intent of establishing the SRNWR and the goals for the SRNWR, as provided in the SRNWR CCP. The proposed project would restore some agricultural acreage to native riparian habitat, effectively removing it from agricultural production; however, the proposed project would be neither irreversible nor cause serious degradation or elimination of the physical or natural conditions that provide the site's values for farming. The proposed project would not stop or hinder the agricultural practices that occur on neighboring properties. This impact is considered less than significant.	LTS	No mitigation is required.	LTS
4.3 Hydrology, Water Quality, and River Geomorphology			
4.3-a. Changes in Flood Hydrology. The proposed project would have the potential to change downstream and local flood hydrology on the Sacramento River by increasing vegetation densities on the floodplain. Modeling results predicted that downstream and local changes in flood stage elevations varied from localized increases up to 1 foot to decreases up to 0.5 foot and that downstream levee freeboard would be maintained at The Reclamation Board-mandated minimum of 3 feet. In addition, changes in elevation resulting from this project are likely to be less than indicated by the model because the model was used previously to evaluate effects from restoration of properties totaling approximately 1,800 acres, and the proposed project total acreage is approximately 836 acres, which represents about 46% less land area than what was previously evaluated. The changes in downstream and local flood hydrology would be less than significant.	LTS	No mitigation is required.	LTS

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.3-b. Changes in Geomorphic Processes. Increasing vegetation densities on the floodplain would alter velocities in the existing floodway in the project area, possibly changing sediment transport, channel scouring, and meander migration. Any changes in velocities would be too small to significantly affect channel hydraulics or lead to erosive forces that could affect this already dynamic system. Also, bank stabilization efforts by others that may include placement of riprap would not be affected by the proposed project. The changes in geomorphic processes resulting from restoration activities would be less than significant.	LTS	No mitigation is required.	LTS
4.3-c. Temporary Effects on Water Quality Associated with Proposed Project Implementation. Implementation of the project would be accomplished through the use of standard agricultural practices already being used throughout the study area. These activities would include orchard removal, disking, seeding, and planting. Irrigation system modification and expansion would include standard trench and backfill techniques. Ground-disturbing activities associated with proposed project implementation are not expected to cause soil erosion and/or sedimentation of local drainages or the Sacramento River channel. Temporary effects on water quality associated with proposed project implementation would be less than significant.	LTS	No mitigation is required.	LTS
4.3-d. Long-Term Effects on Water Quality and Water Temperature in the Sacramento River. Runoff of potentially hazardous materials related to past agricultural activities would be reduced compared to current levels as many of the existing agricultural areas use pesticides and experience flooding. These materials could be transported downstream when the project area becomes inundated during flood events and could contaminate flood water and adversely affect river water quality. Pesticides are not anticipated to be used once restored native vegetation is established. Long-term effects on water quality associated with proposed project implementation would be beneficial. Furthermore, re-establishing native riparian habitat would have no discernible effect on water temperature, and may actually have a moderating effect.	B	Not applicable.	B

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.3-e. Change in Water Demand and Available Water Supply. Over the long term, the proposed project would result in a decrease in the use of groundwater for irrigation. This decrease in water demand is considered a beneficial effect.	B	Not applicable.	B
4.4 Biological Resources			
4.4-a. Change in Habitat Conditions. Implementation of the proposed project would involve restoration of native Sacramento River riparian habitat on land that has been actively cultivated and on fallow agricultural habitats. It would not result in loss or disturbance of natural habitats or special-status plant species because these resources are not present in areas that would be disturbed during restoration activities. Restoration of natural habitat would, in fact, have a long-term beneficial effect to native vegetation and associated plant species.	B	Not applicable.	B
4.4-b. Potential Effects on Wildlife. Implementation of the proposed project would result in restoration of actively cultivated and fallow agricultural habitats that provide important habitat for some wildlife species. Habitat restoration could also result in loss or disturbance of special-status birds nesting on and/or adjacent to the project area during project implementation phases. However, the project has been designed to include avoidance and minimization measures that address potential impacts to nesting birds. (Refer to Chapter 3, "Description of the Proposed Project.") In addition, restoration of native habitats would have a long-term beneficial effect to native vegetation and associated wildlife species.	B	Not applicable.	B
4.4-c. Potential Effects on Fisheries. Implementation of the proposed project would not result in loss or disturbance of fish habitat or special-status fish because these resources are not present in areas that would be disturbed during restoration activities. Restoration of natural habitat would, in fact, have a long-term beneficial effect to fish.	B	Not applicable.	B

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.5 Cultural Resources			
4.5-a. Potential Disturbances to Undocumented Cultural Resources. Implementation of the project would be accomplished through the use of standard agricultural practices already being used throughout the study area. Activities involving site preparation and planting may affect currently undiscovered or unrecorded archaeological sites. The possibility of disturbing unrecorded resources is considered a potentially significant impact.	PS	**4.5-a. If unrecorded cultural resources are encountered during project-related ground-disturbing activities, a qualified cultural resources specialist shall be contacted to assess the potential significance of the find.** If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains, etc.) is made during project-related construction activities, ground disturbances in the area of the find will be halted within a 100-foot radius of the find, and TNC staff shall be notified of the discovery. At that time, TNC shall retain a professional archaeologist. The archaeologist shall determine whether the resource is potentially significant in accordance with CRHR criteria and develop appropriate mitigation. Appropriate mitigation may include no action, avoidance of the resource, and potential data recovery.	LTS
4.5-b. Potential Disturbances to Undocumented Human Remains. Currently undiscovered human remains may be uncovered during proposed project activities. The possibility of disturbing human remains is considered a potentially significant impact.	PS	**4.5-b. Stop potentially damaging work if human remains are uncovered during project-related ground-disturbing activities, assess the significance of the find, and pursue appropriate management.** State law recognizes the need to protect human interments and Native American burials in particular from vandalism and inadvertent destruction. This includes skeletal remains, and items associated with Native American interments. The procedures for the treatment of human remains are contained in California Health and Safety Code Sections 7050.5 and 7052, and California Public Resources Code Section 5097. In accordance with the California Health and Safety Code, if human remains are uncovered during ground disturbances, TNC and its contractors shall immediately halt potentially damaging excavation in the area of the burial and notify the respective County Coroner and a professional archaeologist. The California Health and Safety Code requires that if human remains are found	LTS

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		in any location other than a dedicated cemetery, excavation is to be halted in the immediate area, and the county coroner is to be notified to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission by telephone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). Following the coroner's findings, the archaeologist, the Native American Heritage Commission designated Most Likely Descendent (MLD), and the archaeologist shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities of TNC for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.9.	
Cumulative Impacts			
The proposed project would result in no cumulatively considerable adverse impacts to the natural resources (e.g., soils) present on the land in the study area. Nor would it result in cumulative adverse impacts to hydrology, water quality, or river geomorphology. No cumulatively considerable impacts would occur to cultural resources. The proposed project would result in cumulative beneficial impacts to sensitive habitats, native vegetation, and associated wildlife species. It would also result in cumulative beneficial impacts to Sacramento River fisheries. Re-establishing fully functioning riparian ecosystems would result in cumulative beneficial effects to groundwater and surface water quality. Together, the activities of the CALFED Program, the Sacramento River Conservation Area Forum, the Central Valley Project Improvement Act program, and USFWS are coordinated and comprise a concert of programs and projects with overlapping goals and objectives.			
B = Beneficial Impact	LTS = Less-than-Significant Impact	PS = Potentially Significant Impact	