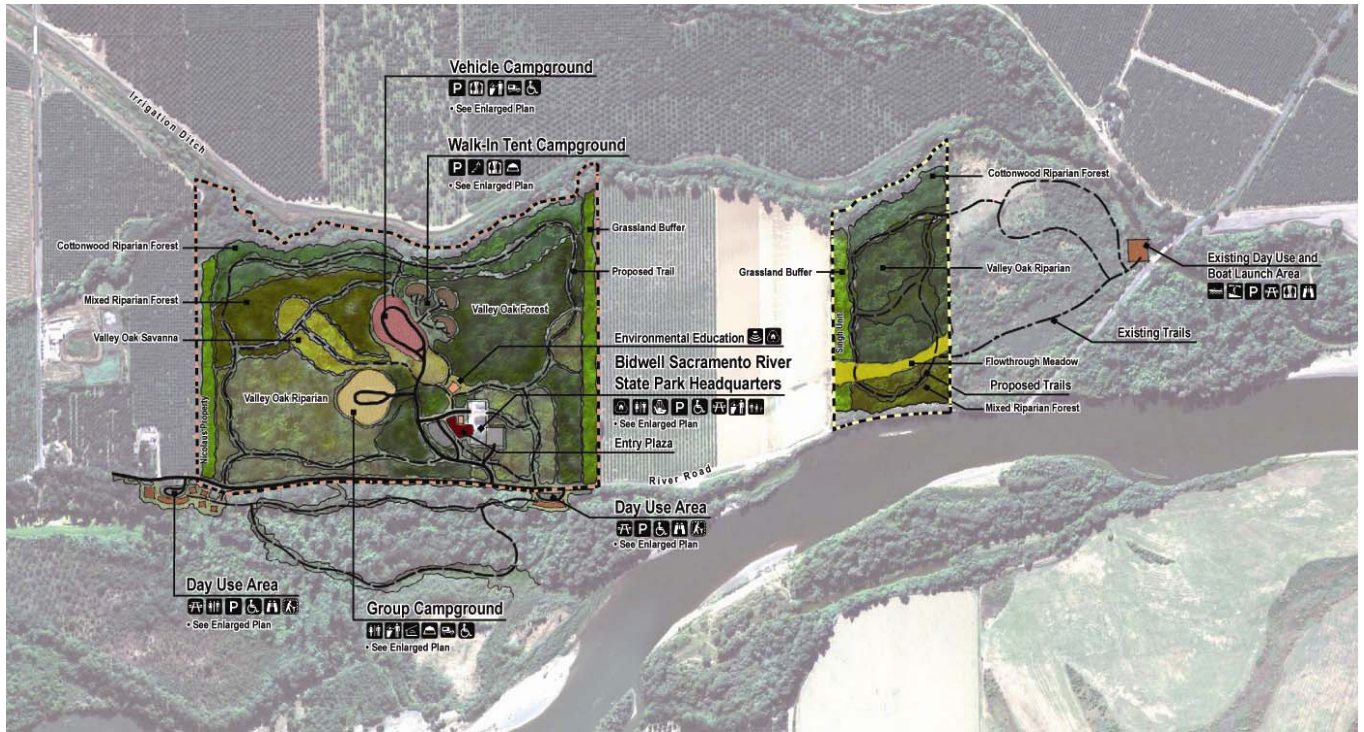


Final Environmental Impact Report
Bidwell–Sacramento River State Park
Habitat Restoration and Outdoor Recreation
Facilities Development Project

SHC# 2007082160



Lead Agency:

California Department of Parks and Recreation

Project Proponent:

The Nature Conservancy

September 17, 2008

Final Environmental Impact Report
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ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
Bay-Delta	San Francisco Bay/Sacramento-San Joaquin River Delta
BP	before present
BMP	Best Management Practice
BSRSP	Bidwell-Sacramento River State Park
CBDA	California Bay-Delta Authority
CCP	Comprehensive Conservation Plan
CAL FIRE	California Department of Forestry and Fire Protection
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	cubic feet per second
CNPS	California Native Plant Society
CNRFC	California-Nevada River Forecast Center
CRHR	California Register of Historic Resources
CTS	California Toxics Rule
CVP	Central Valley Project
CWA	federal Clean Water Act
DEIR	Draft Environmental Impact Report
DFG	California Department of Fish and Game
DO	dissolved oxygen
DOC	California Department of Conservation
DWR	California Department of Water Resources
EA/FONSI	Environmental Assessment and Finding of No Significant Impact
EC	conductivity and electrical conductivity
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ERP	Ecosystem Restoration Program
ESA	federal Endangered Species Act
ESU	evolutionarily significant unit
FMMP	Farmland Mapping and Monitoring Program
FRS	flood relief structure
FSZ	Farmland Security Zone
HCP	Habitat Conservation Plan

IS	Initial Study
LWD	large woody debris
MAF	million acre-feet
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MOA	Memorandum of Agreement
MSCS	Multi-Species Conservation Strategy
MSDS	Material Safety Data Sheets
ng/L	nanograms per liter
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NAHC	Native American Heritage Commission
NCCP program	Natural Community Conservation Planning program
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NIS	nonnative invasive species (weeds)
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries
NOI	Notice of Intent
NOP	notice of preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWS	National Weather Service
OES	State Office of Emergency Services
PFMC	Pacific Fisheries Management Council
PRBO	Point Reyes Bird Observatory
Reclamation	U.S. Bureau of Reclamation
Regional Board(s)	regional water boards of the State Water Board (see below) (formerly referred to as RWQCB[s])
RM	river mile
ROD	Record of Decision
RV	Recreational Vehicle
SB	Senate Bill
SHPO	State Historic Preservation Officer
SRA	shaded riverine aquatic
SRCA Forum	Sacramento River Conservation Area Forum
SRCA	Sacramento River Conservation Area

SRFCP	Sacramento River Flood Control Project
SRNWR	Sacramento River National Wildlife Refuge
SRWA	Sacramento River Wildlife Area
SRWP	Sacramento River Watershed Program
State	State of California
State Parks	California Department of Parks and Recreation
State Water Board	State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TDS	total dissolved solids
The Reclamation Board	State of California Reclamation Board
TMDL	total maximum daily load
TNC	The Nature Conservancy
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WCB	Wildlife Conservation Board
WDR	Waste Discharge Requirement

1 INTRODUCTION

This document is ~~the Final a Draft~~ Environmental Impact Report (Final ~~E~~IR) on the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project (proposed project or project). It has been prepared under the direction of the lead agency, California Department of Parks and Recreation (State Parks), in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Sections 15000 et seq.).

On January 31, 2008, State Parks distributed to public agencies and the general public a draft environmental impact report (Draft EIR) pursuant to CEQA for the proposed project. A 45-day public-review period, as required by Section 15105 of the State CEQA Guidelines, was provided on the Draft EIR that ended on March 17, 2008. Thirteen letters providing comments on the document were received. In addition, consistent with Section 15202 of the State CEQA Guidelines, a public hearing was held by State Parks on February 19, 2008, during which time agencies and the public were given the opportunity to provide oral or written comments on the Draft EIR.

This Final EIR responds to the written and oral comments received on the Draft EIR (see Chapter 8) and has been prepared in accordance with Sections 15089 and 15132 of the State CEQA Guidelines. This Final EIR includes the entire Draft EIR text and appendices, which have been revised in concert with the responses to comments. Revisions to the EIR text are shown with strikethrough (~~strikethrough~~) text for deletions and underlined (underlined) text for additions. The *Hydraulic Analysis for Flood Neutrality on the Nicolaus and Singh Properties, Sacramento River, Mud Creek, and Big Chico Creek*, the *Riparian Habitat Restoration Plans* for the Nicolaus property and the Singh Unit, and the *Recreation Facilities Plan* and have been revised in response to comments and the new documents (replaced in their entirety) are provided in Appendices B, C, and D, respectively of this Final EIR. Additionally, the Mitigation Monitoring and Reporting Program has been prepared and is included as Appendix G of this Final EIR.

Before adopting the project, the lead agency, State Parks, is required to certify that the Final EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

1.1 PROJECT OVERVIEW

State Parks, with planning assistance from ~~T~~the Nature Conservancy (TNC), is proposing to implement the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project on two parcels known as the Singh Unit and Nicolaus property (collectively known as the project site) along the Sacramento River within and adjacent to Bidwell-Sacramento River State Park (BSRSP or Park), west of the City of Chico in Butte County, California. The Singh Unit is owned by State Parks and located within BSRSP. The Nicolaus property is currently owned by TNC, but would be transferred to the State Parks, as part of the proposed project, prior to implementation of habitat restoration activities and recreation facilities development. It is located immediately adjacent to the Indian Fisheries subunit of BSRSP. After transfer of the Nicolaus property to State Parks, the current BSRSP headquarters (located in the Indian Fisheries subunit) would be relocated to the existing farm complex on the Nicolaus property, which is on higher, less frequently flooded ground than the current headquarters location. Both the Singh Unit and Nicolaus property are currently in agricultural production (walnut and/or almond orchards). There is a Williamson Act contract on the Nicolaus property. ; a notice of nonrenewal and the contract will prior to habitat restoration or recreation facilities development on the Nicolaus property. Prior to habitat restoration or recreation facilities development on the Nicolaus property, the contract will either be phased out, amended, or a new contract will be executed, which allows for such uses.

1.1.1 HABITAT RESTORATION

The first project objective is to restore natural topography and vegetation on the Singh Unit and Nicolaus property. This includes the removal of two human-made berms on the Singh Unit; the removal of orchards from both properties; the removal of nonnative vegetation (including eucalyptus trees on the Singh Unit adjacent to River Road); and restoration of the following natural communities:

- ▶ cottonwood mixed riparian forest,
- ▶ valley oak savannah,
- ▶ mixed riparian forest,
- ▶ valley oak riparian forest, and
- ▶ native grasslands.

The Singh Unit and Nicolaus property present a unique opportunity for habitat restoration because they are located ~~at~~ near the confluence of the Sacramento River, Big Chico Creek, and Mud Creek. The protection and restoration of habitat on these two parcels would aid in the recovery of special-status species, rehabilitate natural processes along the river, protect and restore riparian habitat, and improve water quality.

1.1.2 OUTDOOR RECREATION FACILITIES DEVELOPMENT

The second project objective ~~is to develop~~ includes the transfer of ownership of the Nicolaus property from TNC to State Parks and development of outdoor recreation facilities on both the Nicolaus property and the Singh Unit. ~~The Nicolaus property would become part of BSRSP and the Williamson Act contract w prior to implementation of habitat restoration activities or outdoor recreation facilities development.~~ The inclusion of the Nicolaus property within BSRSP, and restoration of the Nicolaus property and the Singh Unit, would present an opportunity to enhance and expand the Park’s recreational and public access opportunities. Therefore, the project would include the creation of new trails on both properties, aligned to connect with existing and proposed trails and facilities within the Park. It would also result in the construction of new day-use and overnight camping facilities on the Nicolaus property. ~~The Park headquarters would be relocated to the existing farm complex on the Nicolaus property, which is on higher, less frequently flooded ground compared to the current headquarters location~~ (see Chapter 3, “Description of Proposed Project,” Exhibits 3-1 through 3-3). By expanding outdoor recreation facilities and restoring habitat at BSRSP, this project would increase public accessibility to the middle reach of the Sacramento River, while providing more habitat for riparian plant species and river-dependent wildlife.

1.2 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

State Parks has prepared this ~~DEIR~~ to provide agencies and the public with information about the potential environmental effects of the project. This ~~DEIR~~ has been prepared in accordance with the California Environmental Quality Act (CEQA) (Pub. Res. Code Section 21000 et seq.) and the State CEQA Guidelines (14 California Code of Regulations [CCR] Section 15000 et seq.). CEQA defines a “project” as any activity directly undertaken by a public agency that “may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (Pub. Res. Code Section 21065).

An EIR provides information for use in the planning and decision-making process for a project. The purpose of an EIR is not to recommend either approval or denial of a project. An EIR informs the public agency decision-makers and the general public of any significant environmental effects of a project, identifies feasible ways to minimize the significant effects, and describes reasonable alternatives to the project that can reduce environmental impacts. CEQA requires decision makers to balance the benefits of a proposed project with its unavoidable environmental effects in deciding whether to carry out a project. State Parks will consider the information presented in the EIR, as required by CEQA, when determining whether to approve the proposed project.

1.3 TIERED PROJECT-LEVEL EIR

CEQA permits an EIR for a project to tier off a more general EIR for a previously prepared program, plan, policy, or ordinance in instances where the later project would be consistent with the earlier program, plan, policy, or ordinance (Pub. Res. Code Section 21094 and State CEQA Guidelines Section 15152). Tiering promotes efficiency in the CEQA process by encouraging the lead agency to limit an EIR on a later project to examining the significant effects that were not examined as significant effects in the prior EIR or are susceptible to substantial reduction or avoidance by specific revisions in the project (State CEQA Guidelines Section 15152).

This EIR for the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project is a project-level document, tiered off the Bidwell-Sacramento River State Park General Plan and EIR (State Parks 2003, 2006) (Park Plan). The relationship between this project-level EIR and the Park Plan is described below.

1.3.1 BIDWELL-SACRAMENTO RIVER STATE PARK PRELIMINARY GENERAL PLAN AND EIR

The Park Plan for the Bidwell-Sacramento River State Park was completed in 2006, and reflects State Park's dual mandates as the steward of sensitive ecological resources and the provider of outdoor recreation opportunities (DPR 2003, 2006). The Park Plan consists of the following three documents:

- ▶ Bidwell-Sacramento River State Park Preliminary General Plan and Draft EIR (December 2003)
- ▶ Bidwell-Sacramento River State Park Recirculated Draft EIR (Agricultural Resources) (October 2005)
- ▶ Bidwell-Sacramento River State Park Comments and Responses to Comments on the Recirculated Draft EIR (January 2006)

On December 12, 2003, State Parks released the Bidwell-Sacramento River State Park Preliminary General Plan and Draft EIR to the general public and public agencies for review. The General Plan component of the Park Plan was prepared to guide future management direction at Bidwell-Sacramento River State Park over an approximate 20-year planning horizon. It contains a comprehensive and integrated set of Park-wide goals and guidelines for the long-term management of the Park that focus on protection of environmental resources, enhancements to visitor use and recreation opportunities, and improvements to administration and operations of the Park. In addition, the General Plan provides a spatial dimension to Park planning through the use of area concept planning, which includes area-specific management and facility prescriptions for the subunits and potential property additions that were considered in the planning process. A range of new recreation facilities were proposed in the General Plan including, but not limited to, overnight campgrounds, day-use areas, trails, and a visitor center.

The EIR component of the Park Plan analyzed the potentially significant effects of the General Plan on the environment. In accordance with CEQA Section 21091 and State CEQA Guidelines Section 15087, a 45-day public review period for the Draft EIR was provided ending January 26, 2004. During the public review, comments were received from public agencies, private groups, and individuals on environmental issues. In response to the comments and a new policy guidance memorandum from the Resources Agency, State Parks re-evaluated its finding on the conversion of agricultural land, changed the finding to less than significant, and recirculated the portions of the Draft EIR that addressed agricultural resources (pursuant to State CEQA Guidelines Section 15088.5). A 30-day public review period was provided for the Bidwell-Sacramento River State Park Recirculated Draft EIR (Agricultural Resources) from October 18, 2005 to November 17, 2005. State Parks received comments on the Recirculated Draft EIR, prepared responses, and published the Bidwell-Sacramento River State Park Comments and Responses to Comments on the Recirculated Draft EIR in January 2006.

Together, the Bidwell-Sacramento River State Park Preliminary General Plan and Draft EIR (December 2003), the Bidwell-Sacramento River State Park Recirculated Draft EIR (Agricultural Resources) (October 2005), and the Bidwell-Sacramento River State Park Comments and Responses to Comments on the Recirculated Draft EIR (January 2006) constitute the Final EIR (Final EIR) for the Bidwell-Sacramento River State Park General Plan. The Final EIR was certified and the General Plan was adopted by State Parks on March 10, 2006.

As described in Section 4.1.3 of the Park Plan, the General Plan Final EIR provides an analysis of broad environmental issues at the general planning stage, and allows the environmental review for subsequent projects to be tiered, pursuant to or consistent with the General Plan. Based on review of the Park Plan, the proposed Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project is consistent with and implements the following Park Plan goals:

Goal ER-1: Preserve, maintain and, where necessary, rehabilitate the Park's ecosystems to protect natural features and processes and perpetuate biological resource functions.

- ▶ **Goal ER-1.1:** Protect and restore sensitive natural communities, including wetland, valley oak woodland, and other successional riparian woodland plant communities that support the Park's abundant natural resources and function in the evolving hydrological and geomorphologic conditions of the middle reaches of the Sacramento River.
- ▶ **Goal ER-1.2:** Manage for the perpetuation of special-status plant, terrestrial wildlife, and aquatic species within the Park, in accordance with state and federal laws.
- ▶ **Goal ER-1.3:** Reduce the presence of invasive nonnative plant species.
- ▶ **Goal ER-1.4:** Reduce the numbers of feral and other problematic nonnative animals, particularly those that have a negative effect on the populations of native special-status species.
- ▶ **Goal ER-1.5:** Preserve and enhance, as appropriate, habitat corridors provided by the Park and between the Park and other areas of similar habitats to maintain or increase their usage by native plant and animal species.

Goal ER-2: Protect the culturally significant resources within the Park, providing interpretive and educational opportunities, where feasible.

- ▶ **Goal ER-2.1:** Locate and assess the significance of cultural resources within the Park

Goal ER-3: Operate the Park within the context of natural watershed functions, and promote watershed health, wherever possible.

- ▶ **Goal ER-3.1:** Allow for the natural meander of the Sacramento River where the river course and the associated flood events would be compatible with public safety, environmental protection considerations, and principles of the Sacramento River Conservation Area Handbook (SCRAF 2002).
- ▶ **Goal ER-3.2:** Operate Park facilities and manage resources in a manner that does not contribute to degradation in water quality of the watershed.

Goal ER-4: Preserve, perpetuate, and provide access to the distinctive landscape qualities that reinforce the general character of Bidwell-Sacramento River State Park.

- ▶ **Goal ER-4.1:** Preserve the natural landscape appearance of the Sacramento River corridor and its tributaries.
- ▶ **Goal ER-4.3:** Establish a uniform and consistent appearance of facilities and landscapes within the Park that are aesthetically pleasing and compatible with the landscape setting.

Goal VU-1: Provide recreational opportunities associated and compatible with the unique resources of the Sacramento River and its riparian and oak woodland environments.

- ▶ **Goal VU-1.3:** Develop additional day-use facilities near recreational or aesthetic amenities based on availability of appropriate sites.
- ▶ **Goal VU-1.4:** Develop a range of overnight camping opportunities in the Park based on availability of appropriate sites.
- ▶ **Goal VU-1.6:** Provide high quality wildlife observation opportunities throughout the Park.

Goal VU-2: Provide educational and interpretive opportunities associated with the unique natural and cultural resources of the Sacramento River and its riparian and oak woodland environments.

- ▶ **Goal VU-2.3:** Disseminate interpretive and educational information to Park visitors and the local community via non-staffed facilities.
- ▶ **Goal VU-2.4:** Evaluate opportunities to develop a visitor center to provide multiple visitor services at an easily accessible location that serves local and regional residents.

Goal VU-3: Provide safe, convenient, and well-connected facilities for multiple modes of transportation within and between the Park's subunits.

- ▶ **Goal VU-3.1:** Provide for safe and readily available access to the Park from the local roadway system serving the Park.
- ▶ **Goal VU-3.3:** Provide car and bus parking spaces for points of interest where environmentally compatible and as space allows.
- ▶ **Goal VU-3.4:** Provide for an interconnecting trail network within the Park, where feasible, and consider linkages to regional trail systems where appropriate.
- ▶ **Goal VU-3.6:** Provide access to recreational opportunities to all people regardless of physical limitations.
- ▶ **Goal VU-3.7:** Develop a system of signage that directs, orients, and educates visitors within the Park.
- ▶ **Goal VU-3.8:** Provide for the safety of Park visitors while circulating within the Park.

Goal AO-1: Establishment of well-defined Park boundaries that can serve as base for future expansion in accordance with the vision and goals for the Park.

- ▶ **Goal AO-1.2:** Expand the Park to promote consolidated management of natural resources and recreational opportunities.

Goal AO-2: Manage, maintain, and operate Park facilities to meet visitor needs.

- ▶ **Goal AO-2.1:** Establish a centralized location for administrative facilities that promotes efficient management of the Park's resources.
- ▶ **Goal AO-2.2:** Maintain Park facilities to meet visitor needs.
- ▶ **Goal AO-2.3:** Provide a safe environment for visitors to the Park.

Goal AO-3: Develop facilities within the parameters of the Park’s natural and physical environment, and in consideration of the safety of Park visitors.

- ▶ **Goal AO-3.1:** Site and design appropriate Park facilities to embrace natural river processes.
- ▶ **Goal AO-3.2:** Develop facilities that are supported by established infrastructure systems.
- ▶ **Goal AO-3.3:** Develop facilities that do not conflict with ambient air quality and noise standards.
- ▶ **Goal AO-3.4:** Ensure the safety of Park visitors during the planning and development of new Park facilities.
- ▶ **Goal AO-3.5:** Incorporate principles and practices of sustainability into the Park’s design, improvements, and maintenance and operations, and utilize adaptive management principles, to the extent feasible.

Goal AO-4: Cooperate with local landowners, communities, and public agencies to foster coordinated management of public lands along the Sacramento River.

- ▶ **Goal AO-4.1:** Allow local communities the opportunity to provide input into Park planning and environmental review processes.
- ▶ **Goal AO-4.4:** Work with private landowners in proximity to the Park to minimize conflicts associated with the mixed public and private land ownership pattern in the area.
- ▶ **Goal AO-4.5:** Establish a multi-agency approach to regional public lands management where practical and feasible.

Because the project is consistent with the Park Plan goals, the Park Plan will provide the more general, first-tier environmental document, and this DEIR will focus on analyzing the issues specific to the project.

1.4 CONSISTENCY WITH THE CALFED PROGRAM

The current planning for the proposed project is funded by a CALFED Ecosystem Restoration Program (CALFED ERP Program) grant (ERP-02-P16D). The purpose of the grant was to provide funding for the acquisition of properties in the project area from willing sellers (Nicolaus) and transfer of purchased properties to an appropriate long-term conservation owner. In addition, the grant called for developing restoration and management plans, including recreation facilities plans, and aquatic surveys of adjacent tributaries. The mission of the CALFED ERP Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the San Francisco Bay/Sacramento-San Joaquin Delta (Bay-Delta). The Record of Decision (ROD) for the approval of the CALFED Program documents the final selection of the Preferred Program Alternative that includes broad programmatic actions to restore ecosystem function to the Bay-Delta. The ERP is among the set of linked programmatic actions comprising the Preferred Program Alternative to be implemented over a 30-year period. The goal of the ERP is to improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta system to support sustainable populations of diverse and valuable plant and animal species (CALFED 2000a). The ROD includes a summary list of programmatic actions designed to achieve the objectives of the ERP. The most applicable of these actions to the proposed project specifies protection and restoration of the Sacramento River meander corridor consistent with SRCA river corridor management plans and processes.

1.4.1 CALFED FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT AND ENVIRONMENTAL IMPACT REPORT

The CALFED Final Programmatic Environmental Impact Statement and Environmental Impact Report (CALFED Final PEIS/EIR) provides a very broad, programmatic analysis of the general effect of implementing the multiple components of the CALFED Program over a 30-year period (2000–2030) across two-thirds of the State of California. The analysis of impacts in the CALFED Final PEIS/EIR is not intended to address any site-specific environmental effects of individual projects; therefore, the analyses of direct, indirect, and cumulative impacts contained in the CALFED Programmatic document are not sufficiently detailed for purposes of this DEIR, which focuses on a specific project and a specific affected geographic area over a discreet time frame. Preparation of this DEIR for the proposed project has included reviews of applicable chapters and sections contained in the CALFED Final PEIS/EIR and the ROD to develop background information, assess consistency of the proposed project with the CALFED Program Preferred Program Alternative, and provide mitigation guidance. This DEIR, tiered from the Park Plan, includes an independently developed analysis of the impacts of the proposed project, including direct, indirect, and cumulative impacts, and an analysis of alternatives to the proposed project. The proposed riparian habitat restoration included in this project is consistent with the programmatic guidance contained in the CALFED Final PEIS/EIR. Because the planning phase of the proposed project is funded by a CALFED ERP Program grant (ERP-02-P16D), it is also consistent with the ROD for the approval of the CALFED Program. Furthermore, it is consistent with the Multi-Species Conservation Strategy (MSCS), which is part of the comprehensive regulatory compliance strategy that is integrated with the CALFED Final PEIS/EIR.

Preparation of this DEIR included reviews of the following chapters, sections, and plans that are parts of the CALFED Final PEIS/EIR, as well as the ROD documenting the final selection of the Preferred Program Alternative:

- ▶ Chapter 1, “Program Description,” was reviewed for background information.
- ▶ Section 5.1, “Water Supply and Water Management,” was reviewed for background information and to determine consistency of the proposed project with the CALFED Program Preferred Program Alternative.
- ▶ Section 5.2, “Bay-Delta Hydrodynamics and Riverine Hydraulics,” was reviewed for background information and to determine consistency of the proposed project with the Preferred Program Alternative.
- ▶ Section 5.3, “Water Quality,” was reviewed for background information and to determine consistency of the proposed project with the Preferred Program Alternative.
- ▶ Section 6.1, “Fisheries and Aquatic Ecosystems,” was reviewed for background information and to determine consistency of the proposed project with the Preferred Program Alternative.
- ▶ Section 6.2, “Vegetation and Wildlife,” was reviewed was reviewed for background information and to determine consistency of the proposed project with the Preferred Program Alternative.
- ▶ Section 7.1, “Agricultural Land and Water Use,” was reviewed for background information and to determine consistency of the proposed project with applicable programmatic actions under the ERP as part of the Preferred Program Alternative. Mitigation Strategies 4, 10, 11, 18 and 19 were incorporated into the development of the proposed project in order to avoid potential impacts to agricultural lands and water use.
- ▶ Section 7.7, “Recreation Resources,” was reviewed for background information and to determine consistency of the proposed project with the Preferred Program Alternative. The proposed project supports Mitigation Strategies 1, 9, 11, 15, and 17 through the development of new recreation facilities.

- ▶ Section 7.11, “Cultural Resources,” was reviewed to determine consistency of the proposed project with the Preferred Program Alternative.
- ▶ Ecosystem Restoration Program Plan, Volume II: Ecological Management Zone Visions, was used as a source of information for the project description and to assess consistency of the proposed project with specified restoration targets for the Sacramento River Ecological Management Zone.
- ▶ Ecosystem Restoration Program Plan, Strategic Plan for Ecosystem Restoration, Appendix D: Draft Stage 1 Actions, was reviewed to assess consistency of the proposed project with Stage 1 programmatic actions for the mainstem Sacramento River.
- ▶ Multi-Species Conservation Strategy, was reviewed to determine consistency of the proposed project with conservation goals for particular species and community types.
- ▶ ROD for the CALFED Program was reviewed to assess consistency of the proposed project with applicable programmatic actions under the Ecosystem Restoration Program as part of the Preferred Program Alternative.

1.4.2 CALFED PROGRAM MULTI-SPECIES CONSERVATION STRATEGY

The CALFED Program Multi-Species Conservation Strategy (MSCS) was developed for the CALFED Program in accordance with the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA) and California’s Natural Community Conservation Planning Act (NCCPA). The MSCS is a comprehensive programmatic strategy for the conservation of numerous species of fish, wildlife and plants and their habitat based on key CALFED Program elements, such as the ERP and the Environmental Water Account. Implementation of the MSCS is intended to ensure that entities implementing CALFED Program actions will satisfy the requirements of ESA, CESA and the NCCPA. State Parks and TNC will follow the CALFED Program MSCS for any necessary California Endangered Species Act (CESA) and Federal Endangered Species Act (ESA) compliance for the project. Refer to Section 4.4, “Biological Resources,” for further discussion of MSCS goals for wildlife and plant species that occur in the project area.

1.5 COMMENTS ON THE NOTICE OF PREPARATION

The Notice of Preparation (NOP) for the proposed project was distributed on August 28, 2007 to responsible agencies, interested parties, and organizations, as well as private individuals that may have an interest in the project. The NOP was filed with the State Clearinghouse and posted on the State Parks website (August 29, 2007); availability of the NOP was advertised in the Chico Enterprise Record (September 8, 2007); email notification was provided to the Sacramento River Conservation Area Forum (SRCAF) (August 30, 2007); and an announcement was made to the SRCAF technical advisory council on September 8, 2007. The NOP provided a general project description and solicited the views of agencies and the public on the project and the scope of this environmental analysis. State Parks also held a scoping meeting for the public and agencies on September 19, 2007. The purpose of the NOP and the public scoping meeting were to provide notification that an EIR is being prepared for the project and to solicit guidance on the scope and content of the environmental document. Written comments were received and comments were presented by individuals at the public scoping meeting. Appendix A of this DEIR contains a copy of the NOP, scoping meeting notes, copies of written comments received, and a summary of how comments have been addressed in this DEIR.

Comments were presented on the following issues (including references to the sections or chapters in this DEIR where relevant discussions are included):

- ▶ width of the proposed grassland buffers in the habitat restoration plans (Chapter 3 and Section 4.4)
- ▶ type of habitat proposed in the restoration plans for the slough that runs through the Singh parcel (Chapter 3 and Section 4.3)
- ▶ consideration for drainage, groundwater, and topography in the habitat restoration plans (Chapter 3 and Section 4.3)
- ▶ fencing of the project sites (Chapter 3)
- ▶ protection of neighboring land owners from trespassing, fire hazards, and pests/invasive species (Chapter 3 and Section 4.4)
- ▶ description of habitat restoration management considerations (regional plans and key players) (Chapter 3)
- ▶ description of environmental setting and all project elements (Chapter 3)
- ▶ description of how recreation facilities would be designed to be protective of neighboring properties during flood events (Chapter 3)
- ▶ potential effects of cancellation of Williamson Act Contract(s) (Section 4.2)
- ▶ potential effects associated with the above-ground fuel storage tank on the Nicolaus property (Section 4.1)
- ▶ potential effects on traffic, particularly on River Road (Section 4.1)
- ▶ potential effects to wildlife (Section 4.4)
- ▶ description of cumulative projects (Chapter 5)
- ▶ potential need for permits from the Regional Water Quality Control Board (Section 4.3)
- ▶ procedural issues related to public review of the Draft EIR, certification of the Final EIR, and project approval (Chapter 1)

1.6 SCOPE OF THE EIR

The scope of this tiered DEIR was developed based on the preliminary analysis of the proposed project; review of the Bidwell-Sacramento River State Park Preliminary General Plan and Final EIR; review of the CALFED Final PEIS/EIR; a site visit; identified agency concerns; comments received during a public scoping meeting held on September 19, 2007 (Appendix A); and comments received on the Notice of Preparation (NOP) (Appendix A).

As a result of the review of existing information and the scoping process, it was determined that the following issue topics would be the focus of this DEIR analysis:

- ▶ agricultural resources
- ▶ hydrology and water quality
- ▶ biological resources
- ▶ cultural resources
- ▶ air quality and climate change

Under the State CEQA Guidelines Sections 15128, 15143 and 15152, a lead agency may limit an EIR's discussion of environmental effects when such effects are not considered potentially significant or when a General Plan EIR (or Staged EIR, Program EIR, or Master EIR) adequately addresses the potential impact. Therefore, based on the scoping process, the following issues are tiered from the Park Plan and addressed in a lesser level of detail in this DEIR:

- ▶ aesthetics/visual resources
- ▶ geology and soils
- ▶ hazards and hazardous materials
- ▶ land use and planning
- ▶ mineral resources
- ▶ noise
- ▶ population and housing
- ▶ public services
- ▶ recreation
- ▶ transportation/traffic and circulation
- ▶ utilities and service systems

Refer to Section 4.1 for additional discussion of impacts found to be less than significant and adequately addressed in the Park Plan.

1.7 AGENCY ROLES AND RESPONSIBILITIES

1.7.1 LEAD AGENCY

State Parks is the lead agency for the project. State Parks has the principal responsibility for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the EIR public-review process is complete, the Director of State Parks is the party responsible for certifying that the EIR adequately evaluates the impacts of the project. The Director also has the authority to either approve, modify, or reject the project.

1.7.2 TRUSTEE AGENCIES

Trustee agencies under CEQA are designated public agencies with legal jurisdiction over natural resources that are held in trust for the people of the State of California and would be affected by a project, whether or not the agencies have authority to approve or implement the project. The following agencies are identified as trustee agencies for the proposed project:

- ▶ California Department of Fish and Game (DFG), Region 2, with trustee jurisdiction over fish and wildlife and their habitat

1.7.2 RESPONSIBLE AGENCIES

Responsible agencies are public agencies, other than the lead agency, that are anticipated to have discretionary-approval responsibility for reviewing, carrying out, or approving elements of a project. Responsible agencies should participate in the lead agency's CEQA process, review the lead agency's CEQA document, and use the document when making a decision on project elements. Several agencies may have responsibility for, or jurisdiction over, the implementation of elements of the project. These agencies may include the following:

- ▶ Central Valley Flood Protection Board
- ▶ Regional Water Quality Control Board, Region 5 (Redding)

1.7.3 OTHER INTERESTED AGENCIES

Other agencies that may have an interest in the proposed project include:

- ▶ Butte County
- ▶ California Air Resources Board
- ▶ California Department of Conservation, Division of Land Resource Protection
- ▶ California Department of Food and Agriculture
- ▶ California Department of Forestry and Fire Protection
- ▶ California Department of Health Services
- ▶ California Department of Transportation, District 3
- ▶ California Department of Water Resources
- ▶ Native American Heritage Commission
- ▶ National Oceanic and Atmospheric Association, National Marine Fisheries Service
- ▶ Sacramento River Reclamation District
- ▶ State Office of Historic Preservation
- ▶ State Water Board (formerly known as State Water Resources Control Board), Division of Water Quality
- ▶ U.S. Army Corps of Engineers
- ▶ U.S. Fish and Wildlife Service

1.7.4 PERMITS AND APPROVALS

The following permits and approval actions are likely to be required before implementation of the proposed project:

- ▶ Central Valley Flood Protection Board: Encroachment permit for removal of the existing ~~Sacramento River~~ berms on the Singh Unit and construction and maintenance associated ~~with~~ with the proposed habitat restoration and public access use of the project area recreation facilities.
- ▶ Regional Water Quality Control Board: General Construction Storm Water Permit (Order No. 99-08-DWQ) - Storm Water Pollution Prevention Plan; Waste Discharge Requirements (potentially for low-threat discharges from construction dewatering activities that discharge to surface waters, if necessary).

1.8 DRAFT EIR PUBLIC REVIEW PROCESS

On January 31, 2008, State Parks distributed to public agencies and the general public the Draft EIR pursuant to CEQA for the proposed project. A 45-day public-review period, as required by Section 15105 of the State CEQA Guidelines, was provided on the Draft EIR that ended on March 17, 2008. Thirteen letters providing comments on the document were received. In addition, consistent with Section 15202 of the State CEQA Guidelines, a public hearing was held by State Parks on February 19, 2008 from 6:30 p.m. to 8:30 p.m. at the Bidwell Mansion SHP Visitor Center located at 525 The Esplanade, Chico, CA 95926, during which time agencies and the public were given the opportunity to provide oral and written comments on the Draft EIR.

The Draft EIR and the Park Plan, from which this EIR is tiered, were available for review during the 45-day public-review period at the following locations:

California Department of Parks and Recreation
525 Esplanade
Chico, California 95926
(530) 895-4304

Chico Branch of the Butte County Library
1108 Sherman Avenue
Chico, California 95926

Oroville Branch of the Butte County Library
1820 Mitchell Avenue
Oroville, California 95966

Colusa County Free Library
738 Market Street
Colusa, California 95932

Princeton Branch Library
232 Prince Street
Princeton, California 95970

Tehama County Library
645 Madison Street
Red Bluff, California 96080

Scotty's Landing
12609 River Road
Chico, California 95973

California State Parks Website: <http://www.parks.ca.gov/>

State Parks received thirteen letters providing comments on the Draft EIR in addition to comments received at the Public Hearing. The written and oral comments received on the Draft EIR and the responses to those comments are provided in Chapter 8 of this EIR. All comment letters are reproduced in their entirety and oral comments provided during the public-hearing are summarized. Each comment is followed by a response to the comment, with the focus of the response being on substantive environmental issues.

1.8 — PUBLIC REVIEW PROCESS

~~This DEIR is being circulated for public review and comment for a period of 45 days, from **January 31, 2008** through **March 17, 2008**. During this period, comments from the general public, organizations, and agencies, may be submitted to the lead agency on the DEIR's accuracy and completeness. Comments may be submitted to:~~

~~Denise Reichenberg
Sector Superintendent
California Department of Parks and Recreation Northern Buttes District/Valley Sector
525 Esplanade
Chico, California 95926
(530) 895-4304~~

~~This DEIR and the Park Plan, from which this DEIR is tiered, are available for review at the following locations:~~

~~California Department of Parks and Recreation
525 Esplanade
Chico, California 95926
(530) 895-4304~~

~~Chico Branch of the Butte County Library
1108 Sherman Avenue
Chico, California 95926~~

~~Oroville Branch of the Butte County Library
1820 Mitchell Avenue
Oroville, California 95966~~

~~Colusa County Free Library
738 Market Street
Colusa, California 95932~~

~~Princeton Branch Library
232 Prince Street
Princeton, California 95970~~

~~Tehama County Library
645 Madison Street
Red Bluff, California 96080~~

~~Scotty's Landing
12609 River Road
Chico, California 95973~~

~~California State Parks Website: <http://www.parks.ca.gov/>~~

~~Under the "Public Interest" tab, click on "CEQA Notices"
Click on "CEQA Notices for Northern California Parks"
You will then see the project's CEQA documents listed under "Butte County"~~

~~A public workshop and hearing will be held on the DEIR on **Tuesday February 19, 2008** from **6:30 p.m. to 8:30 p.m.** at the Bidwell Mansion SHP Visitor Center located at 525 The Esplanade, Chico CA 95926.~~

1.9 FINAL EIR ORGANIZATION

This Final EIR includes the entire Draft EIR text and appendices, which have been revised in concert with the responses to comments, which are provided in Chapter 8. Revisions to the EIR text are shown with strikethrough (~~strikethrough~~) text for deletions and underlined (underlined) text for additions. The *Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties*, the *Riparian Habitat Restoration Plans* for the Nicolaus property and the Singh Unit, and the *Recreation Facilities Plan* and have been revised in response to comments and the new documents (replaced in their entirety) are provided in Appendices B, C, and D, respectively of this Final EIR. Additionally, the Mitigation Monitoring and Reporting Program has been prepared and is included as Appendix G of this Final EIR.

This ~~DEIR~~ Final EIR is organized as follows:

Chapter 1, "Introduction," summarizes the purpose and scope of the proposed project; and explains the scope and uses of this document.

Chapter 2, "Summary," summarizes the conclusions of the environmental analysis.

Chapter 3, "Description of the Proposed Project," describes the proposed action and project purpose, the related planning and management efforts for the middle Sacramento River, and the proposed project characteristics.

Chapter 4, “Environmental Analysis of the Proposed Project,” describes the local and regional environmental setting, the regulatory background, and the effects of the proposed project for each of the topics listed above under “Scope of the EIR.”

Chapter 5, “Cumulative Impacts,” describes the cumulative impacts of the proposed project.

Chapter 6, “Other CEQA-Required Sections,” discusses growth-inducing effects, significant unavoidable effects on the environment, and irreversible or irretrievable commitments of resources.

Chapter 7, “Alternatives,” describes the alternatives to the proposed project considered in this analysis and the evaluation of the environmental effects of those alternatives.

Chapter 8, “Comments and Responses to Comments on the Draft EIR,” reproduces public comments received on the Draft EIR, including a summary of oral comments from the public hearing held on February 19, 2008, and presents responses to those comments.

Chapter 89, “Agency Roles and Report Preparers,” lists the individuals who prepared this DEIR.

Chapter 109, “References,” lists the sources of information cited throughout this DEIR.

Appendix A, “Project Scoping,” includes the NOP issued for the project, a spreadsheet of comments received, and an explanation of how comments have been addressed in the EIR.

Appendix B, “Hydrologic Analysis,” includes the revised *Hydraulic Analysis for Flood Neutrality on the Nicolaus and Singh Properties, Sacramento River, Mud Creek, and Big Chico Creek* ~~Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties, Sacramento River RM 194–195, August 31~~ May 30, 2008.

Appendix C, “Restoration and Management Plans,” including the revised *Riparian Habitat Restoration Plan, Singh Unit, Sacramento River (RM 194), Bidwell Sacramento River State Park* and the revised *Restoration Design and Management Plan, Nicolaus Property, Sacramento River (RM 195)*, ~~September 2007~~ April 2008.

Appendix D, “Recreation Facilities Plans,” including the revised *Singh and Nicolaus Public Access and Recreation Concept Plan*, ~~March 29, 2007~~ June August 2008.

Appendix E, “Cultural Resources Inventory,” including the *Cultural Resources Inventory and Assessment, Singh and Nicolaus Restoration and Public Access Project*, December 2006.

Appendix F, “Air Quality Modeling Data,” including the assumptions, input parameters, and modeling results, December 2007.

Appendix G, “Mitigation Monitoring and Reporting Program,” is the program adopted by State Parks pursuant to Public Resources Code Section 21081.6 to ensure compliance with adopted or required changes to mitigate or avoid significant environmental effects.

1.10 DOCUMENTS INCORPORATED BY REFERENCE

In accordance with State CEQA Guidelines Section 15150 and 15152, the following documents are incorporated by reference into this ~~DEIR~~ Final EIR, and they are available for review at the locations listed below. The CALFED Final PEIS/EIR is incorporated by reference solely for the purpose of providing background information, to demonstrate consistency of this habitat restoration project with the overall CALFED Program, and to provide mitigation guidance.

State Parks (California Department of Parks and Recreation). 2003 (December). Bidwell-Sacramento River State Park Preliminary General Plan and Draft EIR. Prepared by EDAW. Sacramento, CA.

State Parks (California Department of Parks and Recreation). 2005 (October). Bidwell-Sacramento River State Park Recirculated Draft EIR (Agricultural Resources). Prepared by EDAW. Sacramento, CA.

State Parks (California Department of Parks and Recreation). 2006 (January). Bidwell-Sacramento River State Park Comments and Responses to Comments on the Recirculated Draft EIR. Prepared by EDAW. Sacramento, CA.

The Park Plan documents are available for review at the office of the lead agency:

California Department of Parks and Recreation
525 Esplanade
Chico, California 95926
(530) 895-4304

CALFED Bay-Delta Program. 2000 (July). Final Programmatic Environmental Impact Statement and Environmental Impact Report and portions of the Ecosystem Restoration Program Plan. Sacramento, CA.

CALFED Bay-Delta Program. 2000 (August 28). Final Programmatic Environmental Impact Statement and Environmental Impact Report. Programmatic Record of Decision. Sacramento, CA.

The CALFED documents are available for review at:

http://calwater.ca.gov/calfed/library/library_archive_rod.html

1.11 STANDARD TERMINOLOGY

The Final DEIR uses several standard terms as follows:

Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project is the proposed project, which would involve restoration of native riparian habitat and development of recreational facilities on two parcels, the Singh Unit owned by State Parks and the Nicolaus property owned by TNC.

Park Plan refers to the Bidwell-Sacramento River State Park Preliminary General Plan and Draft EIR, the Bidwell-Sacramento River State Park Recirculated Draft EIR (Agricultural Resources), and the Bidwell-Sacramento River State Park Comments and Responses to Comments on the Recirculated Draft EIR, which constitute the Final EIR for the Bidwell-Sacramento River State Park General Plan.

Project site refers to the Singh Unit and the Nicolaus property, proposed for habitat restoration and recreation facilities.

Project area refers collectively to the area affected by the project, including the Singh Unit, the Nicolaus property, portions of the Bidwell-Sacramento River State Park, and adjacent properties.

Study area refers to a geographic area along the Sacramento River that extends between river mile (RM) 194¹ and RM 196.5 as well as the lower three miles of Mud Creek and Big Chico Creek, and generally corresponds to the study area for the hydrological analysis in this DEIR.

Thresholds of significance means criteria that are established by the lead agency to define the level at which an impact would be considered significant. Criteria are defined by a lead agency based on examples found in CEQA

or the State CEQA Guidelines, scientific and factual data relative to the lead agency jurisdiction, views of the public in the affected area, the policy/regulatory environment of affected jurisdictions, or other factors.

No impact means no change from existing conditions.

Beneficial impact means an effect that may enhance or improve an existing environmental condition.

Less-than-significant impact means no substantial adverse change in the physical environment (no mitigation needed).

Potentially significant effect on the environment (or potentially significant impact) means a potential effect that may cause a substantial adverse change in the environment (mitigation is recommended, because potentially significant impacts are treated the same as significant impacts in the CEQA process).

2 SUMMARY

2.1 INTRODUCTION

State Parks has prepared this tiered ~~project-level draft~~ environmental impact report (~~DEIR~~EIR) to provide agencies and the public with information about the potential environmental effects of the proposed Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project (proposed project or project). This ~~DEIR~~EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) (Pub. Res. Code Section 21000 et seq.) and the State CEQA Guidelines (14 California Code of Regulations [CCR] Section 15000 et seq.). CEQA defines a “project” as any activity directly undertaken by a public agency that “may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (Pub. Res. Code Section 21065).

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

State Parks, with planning assistance from ~~the~~The Nature Conservancy (TNC), is proposing to implement the project on two parcels known as the Singh Unit and Nicolaus property (collectively known as the project site) along the Sacramento River within and adjacent to Bidwell-Sacramento River State Park (BSRSP or Park), west of the City of Chico in Butte County, California. The Singh Unit is owned by State Parks and located within BSRSP. The Nicolaus property is currently owned by TNC, but would be transferred to State Parks, as part of the proposed project, prior to implementation of habitat restoration activities and recreation facilities development. ~~It is located immediately adjacent to the Indian Fisheries subunit of BSRSP. After transfer of the Nicolaus property to State Parks, the current BSRSP headquarters (located in the Indian Fisheries subunit) would be relocated to the existing farm complex on the Nicolaus property, which is on higher, less frequently flooded ground than the current headquarters location. Both the Singh Unit and Nicolaus property are currently in agricultural production (walnut and/or almond orchards). There is a Williamson Act contract on the Nicolaus property. P; a and the contract will out prior to habitat restoration or recreation facilities development on the Nicolaus property, the contract will either be phased out, amended or a new contract will be executed, which allows for such uses. In the interim, agricultural activities will continue on the Nicolaus property.~~

2.2.1 HABITAT RESTORATION

The first project objective is to restore natural topography and vegetation on the Singh Unit and Nicolaus property. This includes the removal of two human made berms on the Singh Unit; removal of orchards from both properties; ~~the~~ removal of nonnative invasive vegetation, including eucalyptus on the Singh Unit adjacent to River Road; and, restoration of the following natural communities:

- ▶ cottonwood mixed riparian forest,
- ▶ valley oak savannah,
- ▶ mixed riparian forest,
- ▶ valley oak riparian forest, and
- ▶ native grasslands.

The Singh Unit and Nicolaus property present a unique opportunity for habitat restoration because they are located ~~at~~near the confluence of the Sacramento River, Big Chico Creek, and Mud Creek. The protection and restoration of habitat on these two parcels would aid in the recovery of special-status species, rehabilitate natural processes along the river, protect and restore riparian habitat, and improve water quality.

2.2.2 OUTDOOR RECREATION FACILITIES DEVELOPMENT

The second project objective ~~is to develop~~ includes the transfer of ownership of the Nicolaus property from TNC to State Parks and development of outdoor recreation facilities on both the Nicolaus property and the Singh Unit. ~~The Nicolaus property would become part of BSRSP and the Williamson Act contract prior to implementation of habitat restoration activities or outdoor recreation facilities development.~~ The inclusion of the Nicolaus property within BSRSP, and restoration of the Nicolaus property and the Singh Unit, would present an opportunity to enhance and expand the Park's recreational and public access opportunities. Therefore, the project would include the creation of new trails on both properties, aligned to connect with existing and proposed trails and facilities within the Park. It would also result in the construction of new day-use and overnight camping facilities on the Nicolaus property. ~~The Park headquarters would be relocated to the existing farm complex on the Nicolaus property, which is on higher, less frequently flooded ground compared to the current headquarters location.~~ By expanding outdoor recreation facilities and restoring habitat at BSRSP, this project would increase public accessibility to the middle reaches of the Sacramento River, while providing more habitat for riparian and river-dependent wildlife and plant species.

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 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. State CEQA Guidelines Section 15126.6(d)(2) state that if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. Alternatives considered in this ~~DEIR~~ include the proposed project, the no project alternative, and the passive restoration alternative.

The no project alternative would not meet the project objectives to restore natural topography and vegetation or increase public access and outdoor recreation opportunities at BSRSP and would not provide the biological benefits that would be provided by the other two alternatives.

The proposed project is the environmentally superior alternative of the alternatives considered. Under the proposed project, native species would be planted and actively maintained for 3 years to allow the planted vegetation to become established. The planned maintenance program includes irrigation and weed control to allow root systems to mature to the depth of the water table and to eliminate or control weeds that could interfere with the establishment of native plants. The proposed project would provide the best balance between avoiding environmental impacts and achieving the project objectives. No significant increases in flood risks would result from any of the alternatives considered. Although some impacts associated with the proposed project would be avoided by the passive restoration alternative, those impacts would be reduced to a less-than-significant level under the proposed project with the incorporation of mitigation. In addition, the proposed project would provide greater benefits to biological and recreational resources than the no project or passive restoration alternatives.

2.5 AREAS OF CONTROVERSY

State Parks issued an NOP on August 28, 2007, to inform agencies and the public of the preparation of an EIR on the proposed project. 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. State Parks received nine written comments on the NOP. State Parks also held a scoping meeting for the public and agencies on September 19, 2007. 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, copies of written comments received, and a summary of how the scoping comments have been addressed in this ~~DEIR~~.

On January 31, 2008, State Parks distributed to public agencies and the general public a Draft EIR pursuant to CEQA for the proposed project. A 45-day public-review period, as required by Section 15105 of the State CEQA Guidelines, was provided on the Draft EIR that ended on March 17, 2008. Thirteen letters providing comments on the document were received. In addition, consistent with Section 15202 of the State CEQA Guidelines, a public hearing was held by State Parks on February 19, 2008, during which time agencies and the public were given the opportunity to provide oral and written comments on the Draft EIR. Chapter 8 of this Final EIR, "Comments and Responses to Comments on the Draft EIR," reproduces the public comments received on the Draft EIR, including a summary of oral comments from the public hearing held on February 19, 2008, and presents responses to those comments.

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. Additionally, there is a Williamson Act contract on the Nicolaus property and members of the public as well as local agencies raised concern about the potential cancellation of that contract. These issues are discussed in detail in Section 4.2, "Agricultural Resources." ~~In addition, the~~ The effects of re-establishing riparian habitat on the direction and flow pattern of flood events has also been expressed as an issue of concern. This issue is discussed in detail in Section 4.3, "Hydrology, Water Quality, and River Geomorphology," and in Appendix B, "Hydraulic Analysis," which includes the *Hydraulic Analysis for Flood Neutrality on the Nicolaus and Singh Properties, Sacramento River, Mud Creek, and Big Chico Creek* ~~Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties, Sacramento River RM 194-195, December 2007~~ May 30, 2008. Comments on the Draft EIR also raised concerns related to the creation of campsites, BSRSP management, human trespass, pests, buffers, and noise. Responses to these comments are provided in Chapter 8 of this EIR. Furthermore, State Parks has revised the project description in response to public and agency concerns and removed the recreational vehicle (RV) campsites from the recreation facilities plans. Please refer to Chapter 3 of this EIR for the revised project description.

**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			
<p>IMPACT 4.2-a. Change of Land Use from Agricultural Land to Restored Native Riparian Habitat and Developed Recreational Facilities. The proposed project would restore agricultural acreage to native riparian habitat and develop outdoor recreation facilities, effectively removing the land from agricultural production. However, the proposed project would neither be 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.</p>	LTS	No mitigation is required.	
<p>IMPACT 4.2-b. Williamson Act Contract Cancellation-Nonrenewal and Land Use Compatibility. The Singh Unit is not in a Williamson Act contract. However, the Nicolaus property (approximately 146 acres) is currently in a Williamson Act contract. Transfer of ownership of the Nicolaus property from TNC to the State of California (i.e., State Parks) would not require a new Williamson Act contract (pursuant to California Government Code Section 51295). However, prior to the land transfer, State Parks is required to <u>advise the Director of Conservation and Butte County of its intention to locate a public improvement on land under a Williamson Act contract (pursuant to Section 51291). Following the transfer, State Parks is required to make findings pursuant to California Government Code Section 51292 to locate a public improvement on support the cancellation acquisition of the property under a Williamson Act contract for the property. Either TNC (prior to the transfer) or State Parks (following the transfer) would serve written notice of nonrenewal to Butte County, which would stop the automatic renewal of the contract and start the 10-year phase-out of the contract. Either TNC (prior to the transfer) or State Parks (following the transfer) would serve written notice of nonrenewal to DOC and Butte County, which would release State parks from the contract after the ninth year following the year the notice of nonrenewal is submitted. The cancellation nonrenewal would represent a 0.07% decrease in the total acreage under <u>Williamson Act contracts</u> in Butte County (using data from 2005, which is the most recent data available). However, per California Government Code Section 51238.1, the proposed habitat restoration and outdoor</u></p>	LTS	No mitigation is required.	

*_B = Beneficial Impact

LTS = Less-than-Significant Impact

PS = Potentially Significant Impact

**Table 2-1
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Before Mitigation*	Mitigation Measure	Level of Significance After Mitigation
recreational facilities would not significantly compromise the long-term agricultural capability of the Singh Unit and Nicolaus property. In addition, the habitat restoration and recreational facilities proposed are considered compatible with agriculture and therefore would have no significant adverse effects on neighboring farmland production. Therefore, this impact is considered less than significant.			
4.3 Hydrology, Water Quality, and River Geomorphology			
IMPACT 4.3-a. Changes in Flood Hydrology. The proposed project would have the potential to change local and downstream flood hydrology on the Sacramento River by changing vegetation densities and land cover types on the floodplain. Modeling results predicted <u>no increase in flood stage elevation due to the project and a small section of decrease in flood elevation of approximately 0.10 foot near the oak savannah habitat on the Nicolaus property.</u> localized changes in flood stage elevations up to 0.10 foot. This small change does not represent an increase that would not pose a significant risk to people, structures, or the operation of flood control infrastructure and does would not violate existing regulations for risk to flood control infrastructure. Project-related changes in local and downstream flood hydrology would be less than significant.	LTS	No mitigation is required.	
IMPACT 4.3-b. Changes in Geomorphic Processes. Increasing vegetation densities (habitat restoration) and changing land cover types (recreation facility development) on the floodplain would alter water velocities in the existing floodway in the project area, possibly changing sediment transport, channel scouring, and meander migration. Modeling predicts <u>slight increases in velocities around the Nicolaus oak savannah habitat as well as the grasslands on both tracts.</u> <u>Additionally, as a result of the Singh Unit flow-through area requested by neighbors to the north of the Singh Unit, there would be an increase in velocities within and north of the Singh flow-through area.</u> However, any potential changes in velocities would be too small to substantially affect channel hydraulics or lead to erosive forces that could affect this already dynamic system. The changes in geomorphic processes resulting from restoration activities would be less than significant.	LTS	No mitigation is required.	

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Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	Level of Significance Before Mitigation*	Mitigation Measure	Level of Significance After Mitigation
<p>IMPACT 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 project area) and construction activities. Restoration activities would include orchard removal, discing, seeding, planting, and temporary herbicide use. Irrigation system modification and expansion would include standard trench and backfill techniques. Development of recreational facilities would include grading and compaction of park roads and parking spaces, and the installation of park trails, buildings, shelters, and restroom facilities. Utilization of standard agricultural practices for restoration implementation would not be expected to cause soil erosion and/or sedimentation of local drainages or the Sacramento River channel. However, potential temporary effects on water quality associated with the construction of recreational facilities could be potentially significant.</p>	PS	<p>Mitigation Measure 4.3-a: Acquire Appropriate Regulatory Permits and Implement SWPPP and BMPs.</p>	LTS
<p>IMPACT 4.3-d. Long-Term Effects on Water Quality and Water Temperature in the Sacramento River. Replacing flood-prone agriculture with restored riparian habitat would decrease pesticide and herbicide applications on land adjacent to the river, thereby increasing water quality. Additionally, restored riparian forests would buffer and filter toxic and organic matter that originate further away from the river, thereby further enhancing water quality. Restoring native riparian habitat would have no discernible effect on water temperature, and may actually have a moderating effect on water temperature over the long-term. The development of recreational facilities would involve the conversion of orchards to roads, campgrounds, trails, and other facilities; which would increase human uses and potentially result in the degradation of runoff water quality from the project site. However, human uses of these areas would generally be low-intensity and facilities would be managed to minimize potential water quality effects. This impact would be less than significant.</p>	LTS	No mitigation is required.	

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**Table 2-1
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Before Mitigation*	Mitigation Measure	Level of Significance After Mitigation
<p>IMPACT 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. The conversion of orchards to native vegetation would require less water for irrigation; especially after planted vegetation has become established. <u>an existing domestic groundwater well</u> One would remain in-use to provide water for recreational facilities, ; however, there would be a The net decrease in water demand/use compared to existing conditions. This decrease in water demand is considered a beneficial effect.</p>	B	No mitigation is required.	
4.4 Biological Resources			
<p>IMPACT 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. It would not result in the loss or disturbance of native habitats or special-status plant species because these resources are not present in areas that would be disturbed during restoration activities. Restoration of native habitat would, in fact, have a long-term beneficial effect to native vegetation and associated plant species.</p>	B	No mitigation is required.	
<p>IMPACT 4.4-b. Introduction and Spread of Invasive Plants (Weeds). Implementation of the proposed project would involve initial ground clearing and an eventual reduction in the active management and control of nonnative invasive plants from the present level associated with agricultural activities on the project site. The restoration plans for both the Singh Unit and the Nicolaus property have specific measures for the control of nonnative invasive plant species. Therefore, the potential for project implementation to increase the risk of spreading nonnative invasive plant species into adjacent existing native habitats is low. The potential introduction and spread of nonnative invasive plants would be a less-than-significant impact.</p>	LTS	No mitigation is required.	
<p>IMPACT 4.4-c. Potential Effects to Wildlife. Implementation of the proposed project would result in an overall benefit to wildlife. Approximately 1506 acres would be restored from cultivated orchard to native riparian habitat, which supports a greater diversity and abundance of wildlife, including many special-status species.</p>	B	No mitigation is required.	

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**Table 2-1
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Before Mitigation*	Mitigation Measure	Level of Significance After Mitigation
<p>IMPACT 4.4-d. Potential Effects to Valley Elderberry Longhorn Beetles. No elderberry shrubs would be directly affected by habitat restoration activities or recreation facilities construction, because these activities would be restricted to areas that have long been subject to high levels of disturbance from agricultural activities and do not support any elderberry shrubs. In addition, the restoration plans do not include planting elderberry shrubs. However, elderberry shrubs that could support valley elderberry longhorn beetle are likely to occur adjacent to the project site. Therefore, focused surveys for elderberry shrubs would be conducted on land within 100 feet of the project site prior to construction. If any elderberry shrubs with 1.0 inch or greater stem diameter are found, USFWS conservation guidelines for valley elderberry longhorn beetles would be followed. Therefore, the proposed project would result in a less than significant impact to valley elderberry longhorn beetles.</p>	LTS	No mitigation is required.	
<p>IMPACT 4.4-e. Implementation of the proposed project could result in a potentially significant construction-related loss and/or disturbance of birds and bats nesting or roosting in or near the project site.</p>	PS	<p>Mitigation Measure 4.4-e: Avoidance of Disturbance to Nesting Migratory Birds and Roosting Bats.</p> <p>Mitigation Measure 4.4-e: Avoidance of Disturbance to Nesting Raptors and Special-status Birds.</p>	B
<p>IMPACT 4.4-f. Potential Effects to 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. The creation of recreational facilities would involve construction activities and increased visitation of the project area; however, this potential impact would be minimized with implementation of a storm water pollution prevention plan and therefore would not result in significant impacts to the Sacramento River fisheries. Restoration of riparian habitat would be expected to have a long-term beneficial effect to fish.</p>	B	No mitigation is required.	

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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			
IMPACT 4.5-a. Potential Disturbances to Undocumented Cultural Resources. Implementation of the project, including site preparation, planting, and recreation facilities development, may affect currently undiscovered or unrecorded archaeological sites. The possibility of disturbing unrecorded resources is considered a potentially significant impact.	PS	Mitigation Measure 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.	LTS
IMPACT 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	Mitigation Measure 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.	LTS
4.6. Air Quality and Climate Change			
IMPACT 4.6-a. Generation of Short-Term Restoration- and Construction-Related Emissions of Criteria Air Pollutants and Precursors. Project-generated, restoration-related emissions levels of criteria air pollutants and precursors would not be substantially different from those currently generated by existing on-site orchard operations. However, emissions of ROG and PM ₁₀ associated with the construction of the campground and new relocation of the park headquarters would exceed associated BCAQMD trigger levels for incorporating applicable recommended emission reduction measures. Because applicable BCAQMD-recommended mitigation measures are not currently incorporated into the project description, this impact would be significant.	S	Mitigation Measure 4.6-a: Implement Measures to Reduce Short-Term Restoration- and Construction Emissions of ROG, NO _x , and PM ₁₀ .	LTS

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**Table 2-1
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Before Mitigation*	Mitigation Measure	Level of Significance After Mitigation
<p>IMPACT 4.6-b. Generation of Long-Term Operation-Related (Regional) Emissions of Criteria Air Pollutants and Precursor Emissions. Operation of the proposed campgrounds, relocated headquarters, and new day-use facilities would result in project-generated emissions of PM₁₀ that exceed BCAQMD’s “Level B” trigger level of 80 lb/day and emissions of ROG that exceed BCAQMD’s “Level C” action-level threshold of 137 lb/day (refer to Table 4.6-5). Thus, project-generated, operation-related emissions of criteria air pollutants and precursors could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the nonattainment status of Butte County. In addition, project-generated emissions could also conflict with air quality planning efforts. As a result, this would be a significant impact.</p>	S	<p>Mitigation Measure 4.6-b. Prohibit campfires during burn bans established by Cal Fire/CAL FIRE and/or BCAQMD’s “Don’t Light Tonight” Advisory Program.</p>	LTS
<p>IMPACT 4.6-c. Local Mobile-Source Carbon Monoxide Emissions. The proposed project would not result in, or contribute to, congestion on nearby roadways or at nearby intersections and, as such, would not result in or contribute to CO concentrations that exceed the California 1-hour CO ambient air quality standard of 20 parts per million (ppm) or the 8-hour CO ambient air quality standard of 9 ppm. As a result, this would be considered a less-than-significant impact.</p>	LTS	No mitigation is required.	
<p>IMPACT 4.6-d. Odor Emissions. Odorous diesel exhaust emissions from on-site construction and restoration equipment would be temporary and intermittent in nature and dissipate rapidly from the source. Also, the proposed project would not include the long-term operation of an odorous emission source. Odorous emissions may occur when the RV dump station is serviced (i.e., biosolids removed); however, pumping of the RV dump station would be performed on an infrequent basis and the dump station would not be located in close proximity to off-site sensitive receptors. Thus, the project would not create objectionable odors affecting a substantial number of people. This impact would be less than significant.</p>	LTS	No mitigation is required.	

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Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	Level of Significance Before Mitigation*	Mitigation Measure	Level of Significance After Mitigation
IMPACT 4.6-e. Toxic Air Contaminant Emissions. The proposed project would not be a source of toxic air contaminant emissions (TACs), and there are no sources of TAC emissions near the project site; therefore, the project would not result in the exposure of sensitive receptors to TAC emissions that exceed recommended thresholds. This would be considered a less-than-significant impact.	LTS	No mitigation is required.	
IMPACT 4.6-f. Greenhouse Gas Emissions. While the project could potentially result in a net increase or decrease in GHG emissions, the size of the change would be considered nominal. Nonetheless, if the project contributed a net increase in GHG emissions, the amount would be less than considerable. This impact would be less than significant.	LTS	No mitigation is required.	
5. Cumulative Impacts			
Agricultural Resources—no cumulatively significant impacts	LTS	No mitigation is required.	
Hydrology, Water Quality, and River Geomorphology—no cumulatively significant impacts	LTS	No mitigation is required.	
Biological Resources—cumulative effects would be beneficial	B	No mitigation is required.	
Cultural Resources—no cumulatively significant impacts	LTS	No mitigation is required.	

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3 DESCRIPTION OF THE PROPOSED PROJECT

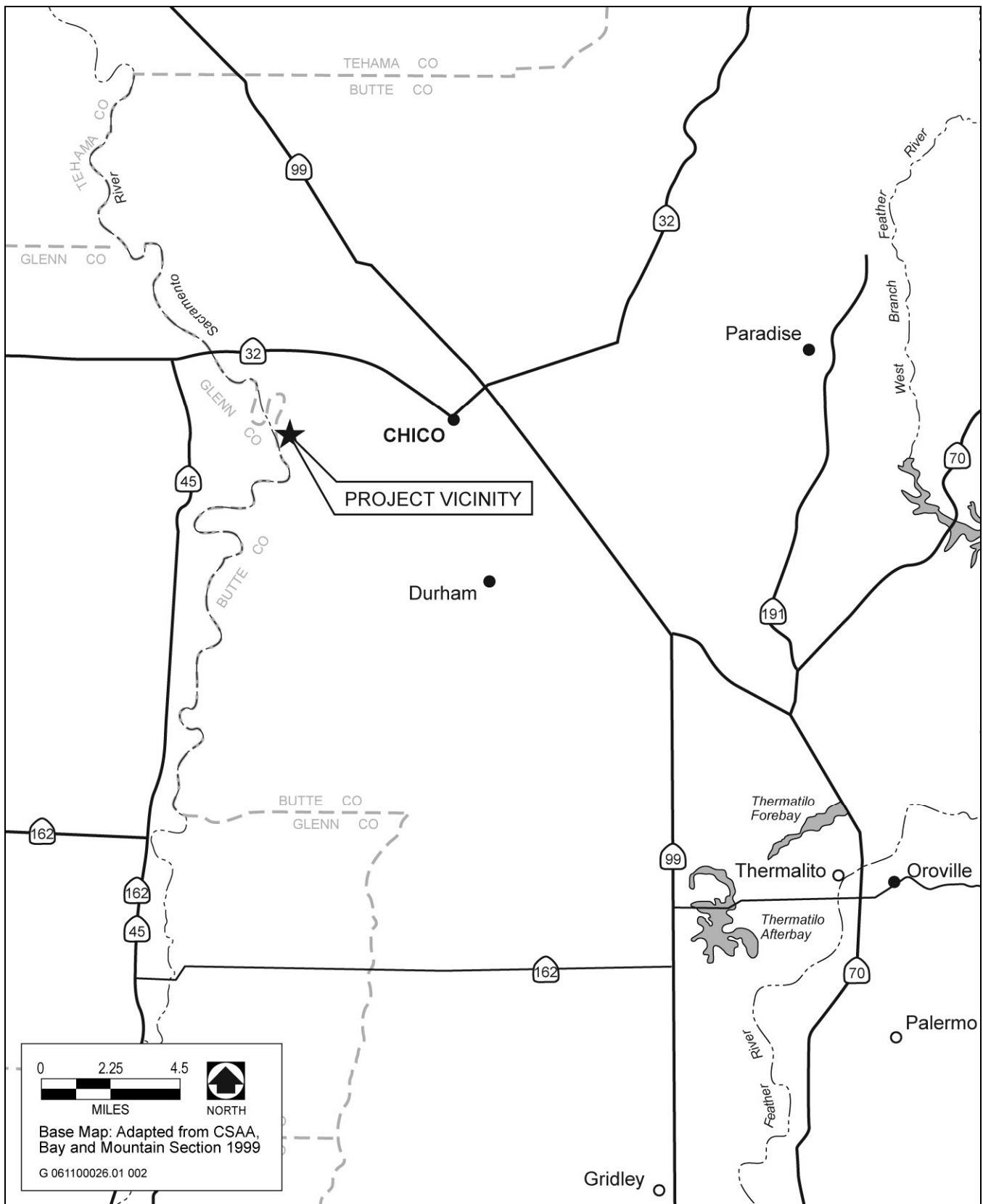
3.1 PROJECT OVERVIEW

3.1.1 PROJECT BACKGROUND AND PURPOSE

The California Department of Parks and Recreation (State Parks), with planning assistance from the Nature Conservancy (TNC), is proposing to implement a habitat restoration and outdoor recreation facility development project on two parcels known as the Singh Unit and Nicolaus property (collectively known as the project site) along the Sacramento River within and adjacent to Bidwell-Sacramento River State Park (BSRSP or Park), west of the City of Chico in Butte County, California (Exhibit 3-1). The Singh Unit is owned by State Parks and located within BSRSP. The Nicolaus property is currently owned by TNC, but would be transferred to State Parks, as part of the proposed project, prior to implementation of habitat restoration activities and recreation facilities development. It's located immediately adjacent to the Indian Fisheries subunit of BSRSP. After transfer of the Nicolaus property to State Parks, the current BSRSP headquarters (located in the Indian Fisheries subunit) would be relocated to the existing farm complex on the Nicolaus property, which is on higher, less frequently flooded ground than the current headquarters location. Both the Singh Unit and Nicolaus property are currently in agricultural production (walnut and/or almond orchards). There is a Williamson Act contract on the Nicolaus property. Prior to habitat restoration or recreation facilities development on the Nicolaus property, the contract will either be phased out, amended or a new contract will be executed, which allows for such uses.

The Singh Unit and Nicolaus property present a unique opportunity for habitat restoration because they are located ~~near~~ at the confluence of the Sacramento River, Big Chico Creek, and Mud Creek (Exhibit 3-2). The protection and restoration of habitat on these two parcels would aid in the recovery of special-status species, rehabilitate natural river processes, protect and restore riparian habitat, and improve water quality. The primary terrestrial and avian wildlife special-status species that would benefit from restoration of the project site include western yellow-billed cuckoo, Swainson's hawk, Cooper's hawk, and valley elderberry longhorn beetle. Several special-status fish species, including Chinook salmon, green sturgeon, and steelhead trout, would also benefit. The proposed project would add approximately 1506 acres of restored riparian habitat to the existing 2,887 acres of protected and restored habitat along the Sacramento River between river mile (RM) 199 and RM 193.

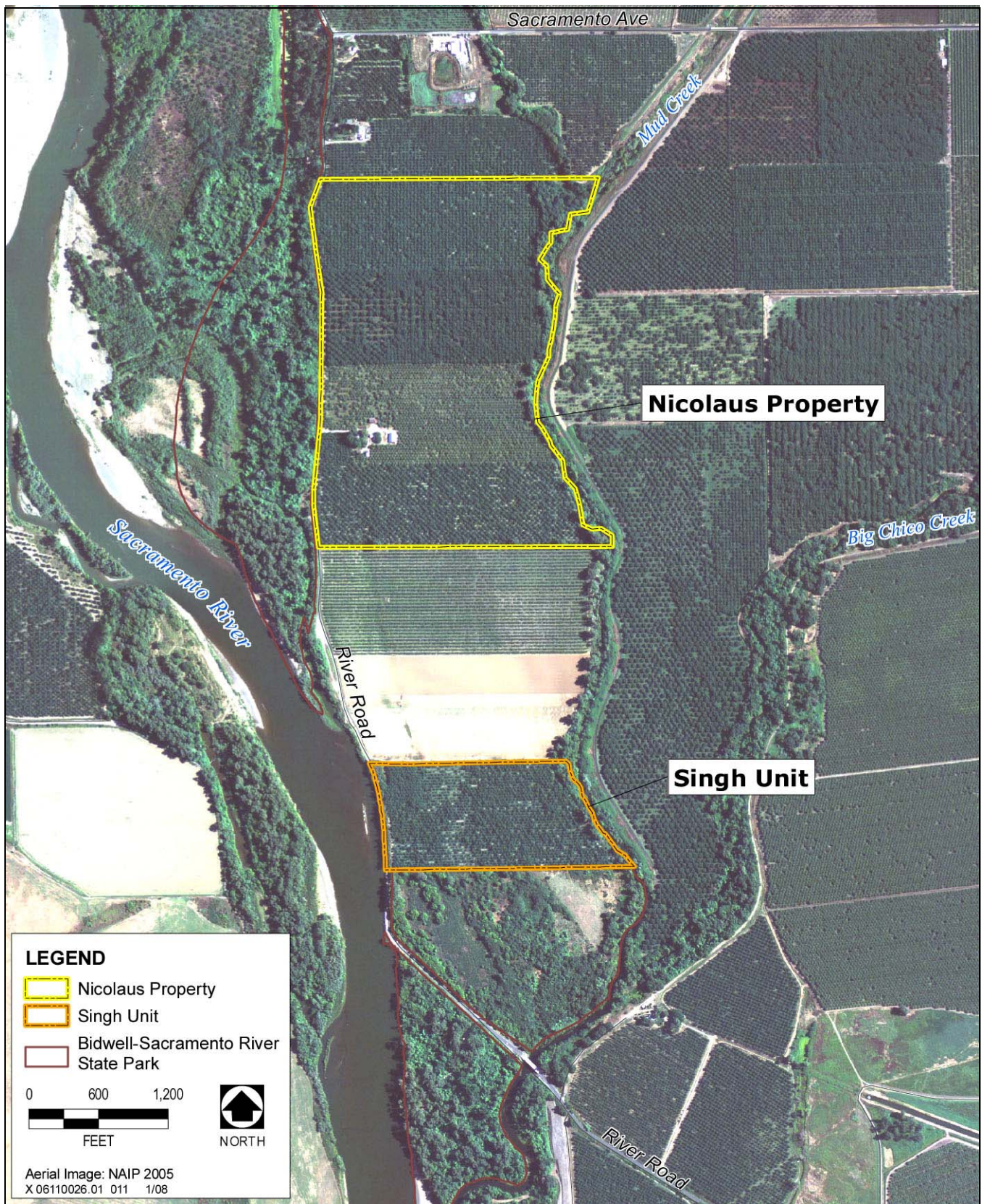
The project would include the transfer of ownership of the Nicolaus property from TNC to State Parks. The Nicolaus property would become part of BSRSP. Prior to implementation of habitat restoration activities or outdoor recreation facilities development, the contract will either be phased out, amended or a new contract will be executed, which allows for such uses. The inclusion of the Nicolaus property within BSRSP, and restoration of the Nicolaus property and the Singh Unit, would present an opportunity to enhance and expand the Park's recreational and public access opportunities through new and expanded trails, new day and overnight facilities, and visitor-service enhancement. ~~It would also enable more efficient siting of Park headquarters facilities.~~ Therefore, in conjunction with restoration activities, the proposed project includes creation and expansion of public outdoor recreation facilities. New trails would be created on both properties that would be aligned to connect with existing and proposed trails and facilities within the Park; and new day-use and overnight camping facilities would be constructed; and the Park headquarters would be relocated to the existing farm buildings on the Nicolaus property, which is on higher, less frequently flooded ground compared to the current headquarters location. By expanding outdoor recreation facilities and restoring habitat at BSRSP, this project would increase public accessibility and opportunities to the middle reaches of the Sacramento River, while providing more habitat for riparian and river-dependent wildlife and plant species.



Source: Data compiled by EDAW 2007

Project Vicinity Map

Exhibit 3-1



Source: Data compiled by EDAW 2007

Aerial Photograph of the Project Site

Exhibit 3-2

3.1.2 PROJECT OBJECTIVES

HABITAT RESTORATION

The first project objective is to restore natural topography and vegetation on the Singh Unit and Nicolaus property. This includes the removal of two human made berms on the Singh Unit; removal of orchards from both the properties; removal of non-native vegetation, including eucalyptus on the Singh Unit adjacent to River Road; and, restoration of the following natural communities on both parcels: cottonwood riparian forest, valley oak savannah, valley oak forest, mixed riparian forest, native grassland, and valley oak riparian forest. The restoration activities proposed for this project have four central objectives, which are aligned with the California Bay-Delta Authority's Ecosystem Restoration Program (ERP) Goals:

1. Improve the ecological health and long-term viability of at-risk species and communities at a critical confluence area by protecting and restoring riparian habitat and rehabilitating floodplain processes through horticultural and process-based restoration (ERP Goal 1).
2. Increase knowledge of ecosystem function and employ adaptive management to improve the ability to engineer "desired future conditions" for riparian restoration projects that focus on lowland tributary confluence areas (ERP Goal 2).
3. Reduce flood damage to important human infrastructure by increasing the storage of floodwaters in the project area (ERP Goal 4).
4. Improve water quality to benefit humans and wildlife through the restoration of riparian vegetation communities, and geomorphic and hydrologic processes (ERP Goal 6).

OUTDOOR RECREATION FACILITIES DEVELOPMENT

The second project objective is to increase public access and outdoor recreation opportunities at BSRSP. The outdoor recreation facilities development component of this project has ~~four~~three key objectives:

- ▶ Develop potential new outdoor recreational use opportunities (day-use and overnight camping).
- ~~▶ Relocate the BSRSP headquarters and maintenance area to the existing Nicolaus property farm buildings and surrounding site where frequency of flooding is decreased.~~
- ▶ Convert the abandoned BSRSP headquarters and maintenance area to a trailhead with parking, picnic facilities, restrooms and interpretive signs.
- ▶ Install trails that connect to existing and proposed trails in the BSRSP's Indian Fisheries Subunit, Big Chico Creek Riparian Area Subunit, and the Department of Fish and Game's (DFG) Pine Creek Unit at Allinger Ranch.

3.1.3 INNER RIVER ZONE OF THE MIDDLE SACRAMENTO RIVER

The Singh Unit and Nicolaus property are located within the inner river zone of the Sacramento River Conservation Area¹ (SRCA), on lands identified by the U.S. Fish and Wildlife Service (USFWS) in the *Final Environmental Assessment for Proposed Restoration Activities on the Sacramento River National Wildlife Refuge* (USFWS 2002) as having high potential for restoration of native riparian habitat that would benefit fish, wildlife and plant species dependent on a naturally functioning riverine ecosystem. The inner river zone stretches from Red Bluff to Colusa and is defined as the 150-year meander zone of the Sacramento River, or the location in which the river has meandered within the last 100 years and is predicted to meander over the next 50 years.

¹ The Sacramento River Conservation Area is defined as the 213,000 acre area along the banks of the Sacramento River between Keswick Dam and Verona where there is the potential for riparian habitat or valley oak woodland through voluntary participation.

Most of the properties within this zone also lie within the 2 ½ to 4-year flood recurrence interval zone of the river, which means that they have a 40 to 25 percent chance of flooding each year, generally in winter or spring (based on aerial photograph-interpreted flood recurrence intervals generated by the California Department of Water Resources [DWR]). The inner river zone guideline defines, for the most part, the SRCA planning boundary used by state and federal agencies, and private entities to restore and enhance natural riparian habitats and functions along the Sacramento River (SRCA Forum 2003). The suitable hydrology, soils, and presence of protected native riparian habitat within the inner river zone contribute to the suitability of the proposed project site for restoration of riparian habitat that was historically extensive along the middle Sacramento River.

3.1.4 IMPORTANCE OF RIPARIAN HABITAT

Over 225 species of birds, mammals, reptiles, and amphibians in California depend on riparian habitats for nesting, foraging, dispersal corridors, and migration stop-over sites. Riparian vegetation supplies instream habitat important for fish, semi-aquatic reptiles and amphibians, and aquatic insects (Riparian Habitat Joint Venture 2004). It is also critical to the quality of instream habitat and aquatic life, providing shade, food, and nutrients that form the basis of the food chain (Jensen et al. 1993, cited in RHJV 2004). Riparian habitats may be the most important habitat for land bird species in California (Manley and Davidson 1993, cited in RHJV 2004). Despite their importance, riparian habitats have been decimated over the past 150 years as a consequence of reservoir construction, levee and channelization projects, livestock grazing, timber harvest, water pollution, introduction of nonnative plant species, gravel and gold mining, and clearing for agricultural, residential, and industrial uses (Knopf et al. 1998, cited in RHJV 2004). Today, depending on the bioregion, riparian habitat covers 2% to 15% of its historic range in California (Katibah 1984 and Dawdy 1989, cited in RHJV 2004).

3.2 PROPOSED PROJECT PARCELS AND LOCATIONS

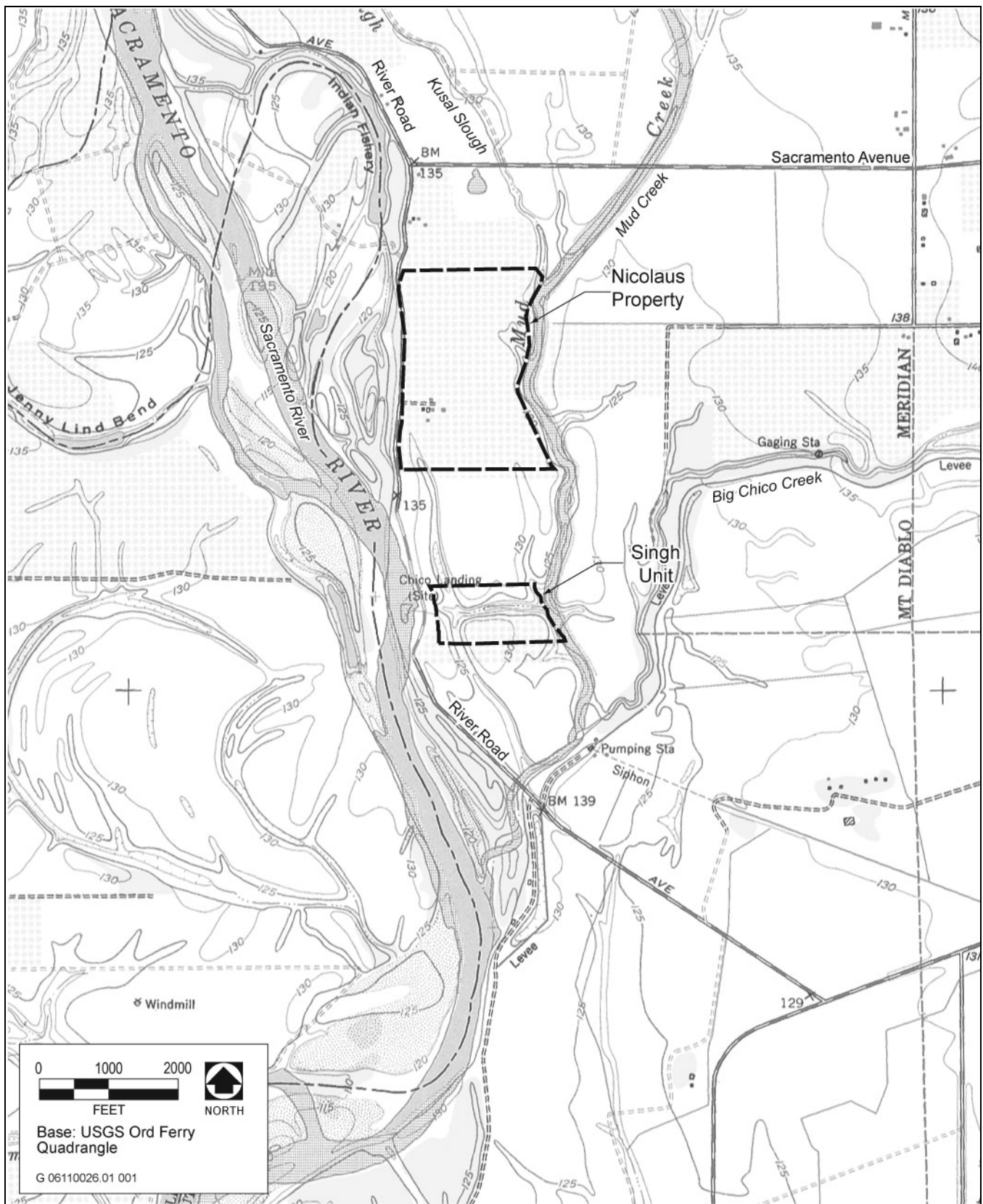
The project site includes the Singh Unit and Nicolaus property. These two non-contiguous parcels are depicted on the USGS Ord Ferry, California USGS 7.5 minute topographic map, within unsurveyed portions of Township 22 North, Range 1 West (Exhibit 3-3). The project site, located along the east bank of the Sacramento River, is adjacent to Mud Creek just upstream of the confluences of Big Chico Creek and Mud Creek and of Big Chico Creek and the Sacramento River. Because the Singh Unit and Nicolaus property are or would become part of BSRSP, respectively, and because potential future public access and recreation elements would be designed to connect to other Park subunits, a summary description of the Park is also provided below.

3.2.1 SINGH UNIT

This approximately 43-acre parcel is a recent addition to the Big Chico Creek Riparian subunit of the BSRSP. The parcel is located along the east bank of the Sacramento River at river mile 194 and bordered on the north by privately owned agricultural land, on the west by River Road, on the east by Mud Creek, and on the south by the Big Chico Creek Riparian Area subunit of BSRSP. The parcel is approximately one-half mile north of the confluence of Big Chico Creek and the Sacramento River and is located in the 1- to 2½-year estimated flood recurrence interval. The unit has historic channel topography and existing shaded riverine aquatic habitat along Mud Creek. Berms constructed from sediment deposited from floods and scraped from the orchard surface are present on the eastern boundary and the southwest corner of the parcel. Approximately 34 acres of the unit are planted in walnuts, ranging in age from one-year replants to ten-year old trees. There is one agricultural ground water well at this site (current capacity of approximately 500 gallons per minute) and a row of non-native eucalyptus trees located along River Road, within the right of way of Butte County, just outside the west boundary of the parcel.

3.2.2 NICOLAUS PROPERTY

This approximately 146-acre parcel is adjacent to BSRSP, located along the east bank of the Sacramento River at river mile 195. It is immediately east of River Road and approximately two miles north of the confluence of Big Chico Creek and the Sacramento River and is located in the 1- to 2½-year estimated flood recurrence interval.



Source: Data compiled by EDAW 2007

USGS 7.5 Minute Topographic Map of Project Site

Exhibit 3-3

The parcel is bordered by River Road on the west, Mud Creek on the east, and privately owned agricultural land to the south and to the north. The parcel has historic channel topography and existing shaded riverine aquatic habitat along Mud Creek. Approximately 104 acres of the parcel are planted in walnuts, ranging in age from 6-year old trees to 11-year old trees. The parcel also contains a 32-acre almond orchard, planted approximately 10 years ago. The parcel includes an agricultural building complex consisting of a residence, two sheds, and a barn. There are five groundwater wells on the Nicolaus property. Four of the wells are intended for agricultural use; however, only one of the agricultural wells (located in the north-central part of the property) is used to water the entire orchard. This well has a current capacity of approximately 1,800-2,000 gallons per minute (Luster 2007). The other three agricultural wells are drilled and cased and could be functional, although they do not currently have pumps or motors. The fifth well is the existing domestic water source, with a capacity of approximately 25 gallons per minute, which is located adjacent to the existing farm house. The complex also includes a 200-gallon diesel fuel tank that would be removed as part of this project.

3.2.3 BIDWELL-SACRAMENTO RIVER STATE PARK

The Park consists of four non-contiguous subunits totaling approximately 315 acres that straddle the Sacramento River between State Route 32 (SR 32) and the mouth of Big Chico Creek (Exhibit 3-4). The Irvine Finch River Access area is located on the west side of the river in Glenn County, while the Pine Creek Landing, Indian Fishery, and Big Chico Creek Riparian Area subunits are situated east of the River in Butte County. Each subunit is characterized by unique land use environments, as described in Table 3-1. The Big Chico Creek Riparian Area includes and is located directly south of the Singh Unit, and the Indian Fishery subunit is located directly west of the Nicolaus property.

Table 3-1 BSRSP Land Uses		
Subunit	Size (acres)	Existing Land Use & Activities
Irvine Finch River Access (including the Beard Addition)	25.2	▶ Developed recreation (boat launch that facilitates motor-boating, kayaking, canoeing, tubing, and fishing; picnicking; and en-route camping)
Pine Creek Landing	4.8	▶ Developed recreation (boat launch that facilitates motor-boating, kayaking, canoeing and fishing, and picnicking); ▶ Dispersed recreation (nature viewing); ▶ Interpretation (interpretive panel)
Indian Fishery (including Brayton Addition)	145.7	▶ Developed recreation (picnicking); ▶ Dispersed recreation (trail use, nature viewing, hiking, and bank fishing); ▶ Interpretation and education (trail with interpretive/educational stations, local school group visits) ▶ Park administration
Big Chico Creek Riparian Area (including the Singh Unit)	139.7	▶ Developed recreation (small boat launch that facilitates kayaking, canoeing and fishing, and picnicking); ▶ Dispersed recreation (bank fishing, trail use, nature viewing, and sunbathing); ▶ Conservation/restoration ▶ Walnut orchard
Total	315.4 -- acres	
Source: California Department of Parks and Recreation (State Parks) 2003, EDAW 2008, EDAW 2007		

The Park is characterized by lush valley oak riparian woodland and other riparian communities, including unique ecological associations. The Park's various communities provide habitat to several special-status species, including western yellow-billed cuckoo, Swainson's hawk, and valley elderberry longhorn beetle, Chinook salmon, green sturgeon, and steelhead trout. In addition to its natural resources, the Park provides opportunities for river-oriented recreation. Recreational opportunities range from nature study, walking, fishing, picnicking, camping, and biking to paddling, floating, and motorized boating along the Sacramento River and its tributaries.

3.2.4 PROJECT SITE ACCESS

Access to the Singh Unit and Nicolaus property is provided by River Road, a two-lane rural road, maintained by Butte County, which runs in a north-south alignment along properties located on the eastern banks of the Sacramento River and its tributaries. West Sacramento Avenue, a two-lane rural road maintained by Butte County, intersects with River Road, thereby linking the downtown Chico area to the Singh Unit, Nicolaus property, and BSRSP. In addition, Chico River Road, a two-lane rural road maintained by Butte County, does not provide direct access to the project site, but is one of the primary roadways that provide access to River Road from Chico (Exhibit 3-5).

3.3 RELATED PLANNING AND MANAGEMENT EFFORTS, RELATED PROJECTS, AND CONFORMANCE WITH EXISTING PROGRAMS

Ecosystems of the Sacramento River have been the subject of study and investigation for over 20 years as scientists, resource agency representatives, and elected officials have considered methods for the protection of riverine resources that also incorporate plans related to flood damage reduction, recreation, and agricultural uses. Complex planning and funding efforts by various agencies and other groups have contributed to the gradual implementation of projects to conserve and restore riparian habitat along the middle Sacramento River system between Red Bluff and Colusa.

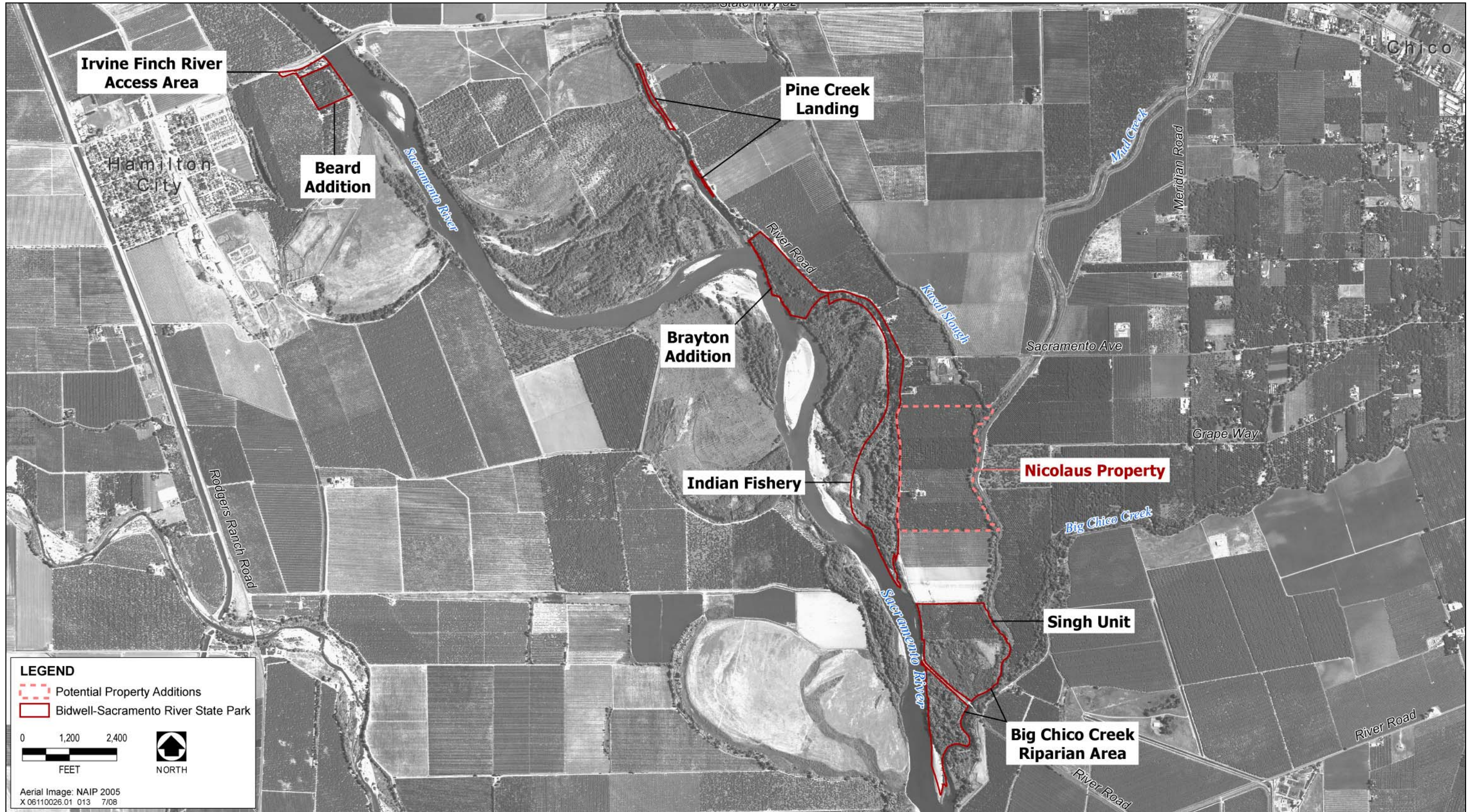
The middle Sacramento River is subject to complex public and private ownership patterns, and consequently, diverse planning and management systems. Exhibit 3-6 shows public and non-profit land ownership in the project area. Public landowners in the vicinity of the project include State Parks, DFG, USFWS, and the Reclamation Board. Other properties are held by TNC, a non-profit organization that purchases and transfers properties into public ownership once they have been restored to natural conditions. Private lands along the middle Sacramento River are primarily used for agriculture, including orchards, row crops, and pasture.

3.3.1 LOCAL AND REGIONAL CONSERVATION PLANNING

BIDWELL-SACRAMENTO RIVER STATE PARK GENERAL PLAN

The General Plan and EIR (Park Plan) for the Bidwell-Sacramento River State Park were completed in 2006, and reflects State Parks' dual mandates as the steward of sensitive ecological resources and the provider of recreation opportunities (State Parks 2003, 2006). As described in Section 1.3 of this DEIR, the proposed project is consistent with and implements a wide range of Park Plan goals. The protection and restoration of natural and cultural resources are key components of the Park Plan. The Park Plan allows for additional biological habitat restoration and water quality protection; preserves scenic and cultural resources; and calls for facility developments and improvements in response to local and regional demand, yet with consideration given to physical and environmental constraints.

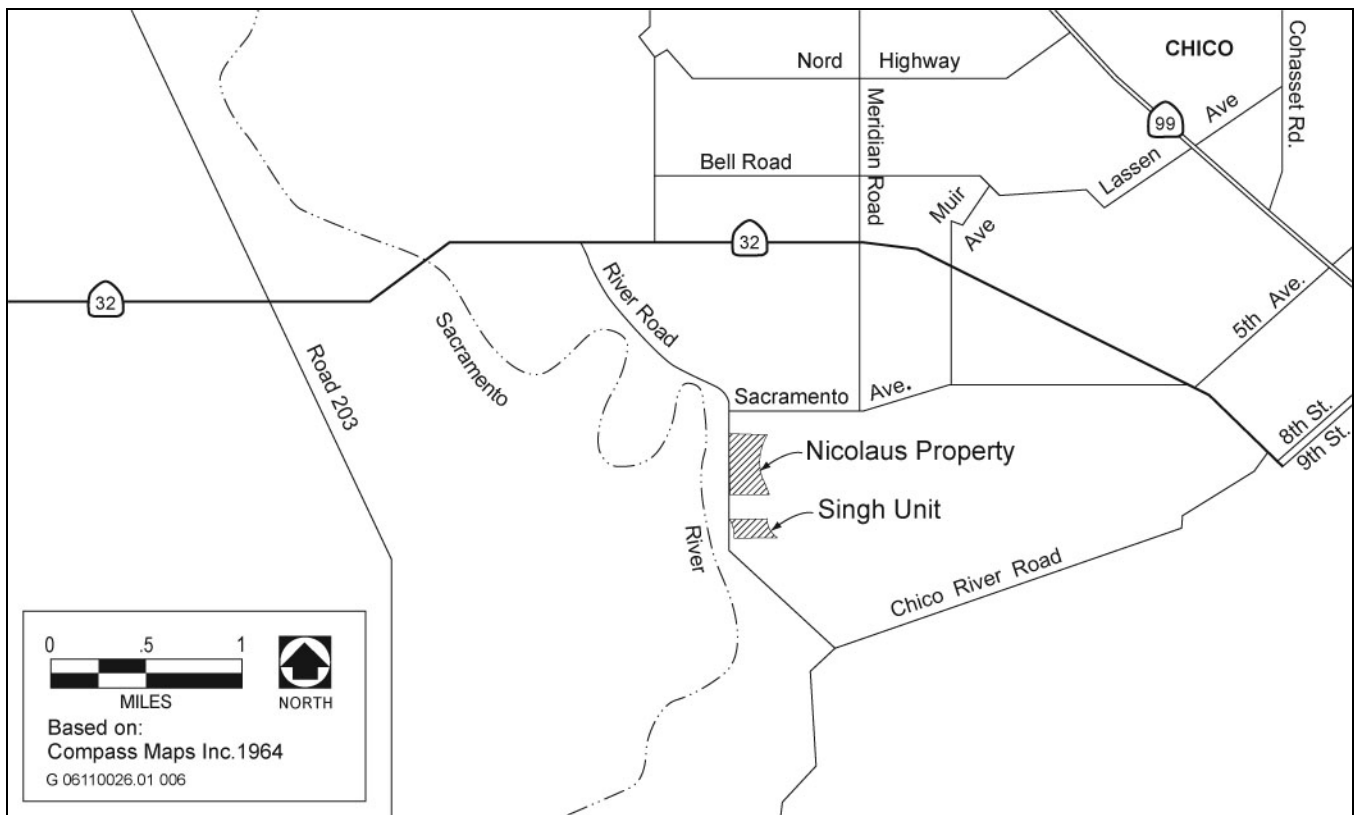
The Park Plan also addresses key planning issues that have been identified during the planning process. These issues include definition of a purpose and vision for the Park; resource protection and management; recreational opportunity/visitor service enhancement; interpretation; facility development; operational improvements; and property acquisition/park expansion. The following list summarizes potential facilities and developments identified in the Park Plan that are relevant to proposed project and this EIR:



Source: Data compiled by EDAW 2007

BSRSP Subunits

Exhibit 3-4



Source: Data compiled by EDAW 2007

Project Site Access Map

Exhibit 3-5

- ▶ New overnight campground, including family and group campsites.
- ▶ New day-use areas.
- ▶ Ongoing operation and use of existing day-use areas.
- ▶ Relocation of existing administrative center to a more centralized location.
- ▶ New day-use area at the location of the existing administrative center.
- ▶ New visitor center that could serve multiple public land managers.
- ▶ Potential for new multi-agency loop trails and associated trailheads.

SACRAMENTO RIVER CONSERVATION AREA

In 1986, the California State Legislature passed Senate Bill 1086, which calls for the development of a management plan for the Sacramento River and its tributaries to protect, restore, and enhance fisheries and riparian habitat. The result of this effort was the Upper Sacramento River Fisheries and Riparian Habitat Management Plan published by the State of California Resources Agency in 1989. This management plan addresses a 222-mile stretch of the Sacramento River from Keswick Dam (in the north) to Verona (in the south), which is called the SRCA. The goal of the SRCA is to “preserve remaining riparian habitat and reestablish a continuous riparian ecosystem along the Sacramento River between Redding and Chico and reestablish riparian vegetation along the river from Chico to Verona.” The Sacramento River Conservation Area Forum (SRCAF) is a group of local, state, federal, and private organizations that help implement the actions necessary to achieve the goal of the SRCA. The guiding principals for the SRCA include: ecosystem management, flood management, voluntary participation, local concerns, bank protection, and information and education. The project site is located within the SRCA; therefore, planning for the project needs to consider the management strategies developed for the SRCA.

TNC, in conjunction with the USFWS, the California Wildlife Conservation Board, and DFG, commissioned a study conducted in 2003 to assess existing and potential public recreation uses, access needs, and opportunities along a 100-mile stretch of the Sacramento River between Red Bluff and Colusa. The goals of the Sacramento River Public Recreation Access Study (EDAW 2003) were: (1) to identify and characterize existing public access opportunities and needs associated with public recreation facilities and infrastructure throughout the study area, and (2) to identify and make recommendations for future public recreation access opportunities and management programs in the study area.

The results of the 2003 study and previous studies indicated substantial public interest in natural areas. Potentially attractive recreation uses along the Sacramento River include trail hiking, walking, hunting and fishing, camping, wildlife viewing, nature study, picnicking, boating, beach activities, attending outdoor cultural events, and visiting museums and historic sites. Regional trends indicate a continued interest in the traditional outdoor recreation activities of boating, fishing, and hunting. Additionally, other nature observation activities, such as bird watching and wildlife viewing, are expected to increase 65% over the next 40 years.

SACRAMENTO WILDLIFE AREA MANAGEMENT PLAN

A Comprehensive Management Plan (DFG February 2004) was prepared for the Sacramento River Wildlife Area, portions of which are located near the project site, particularly the Nicolaus property. The management plan, which updated DFG's management strategy for the Wildlife Area, involved a detailed inventory and analysis of the 13 Wildlife Area units, extensive public outreach, and coordination with other management agencies active in the plan area, including State Parks. The management plan also specified that there would be no substantial changes in land use at the Wildlife Area and that no new facilities are planned. The wildlife area would continue to be focused on conservation, allowing appropriate outdoor recreational opportunities, including hunting, fishing, hiking, wildlife observation, environmental education, and nature interpretation. The Sacramento River Wildlife Area is currently open to the public and recreation use is a major component of the management plan.

USFWS COMPREHENSIVE CONSERVATION PLAN

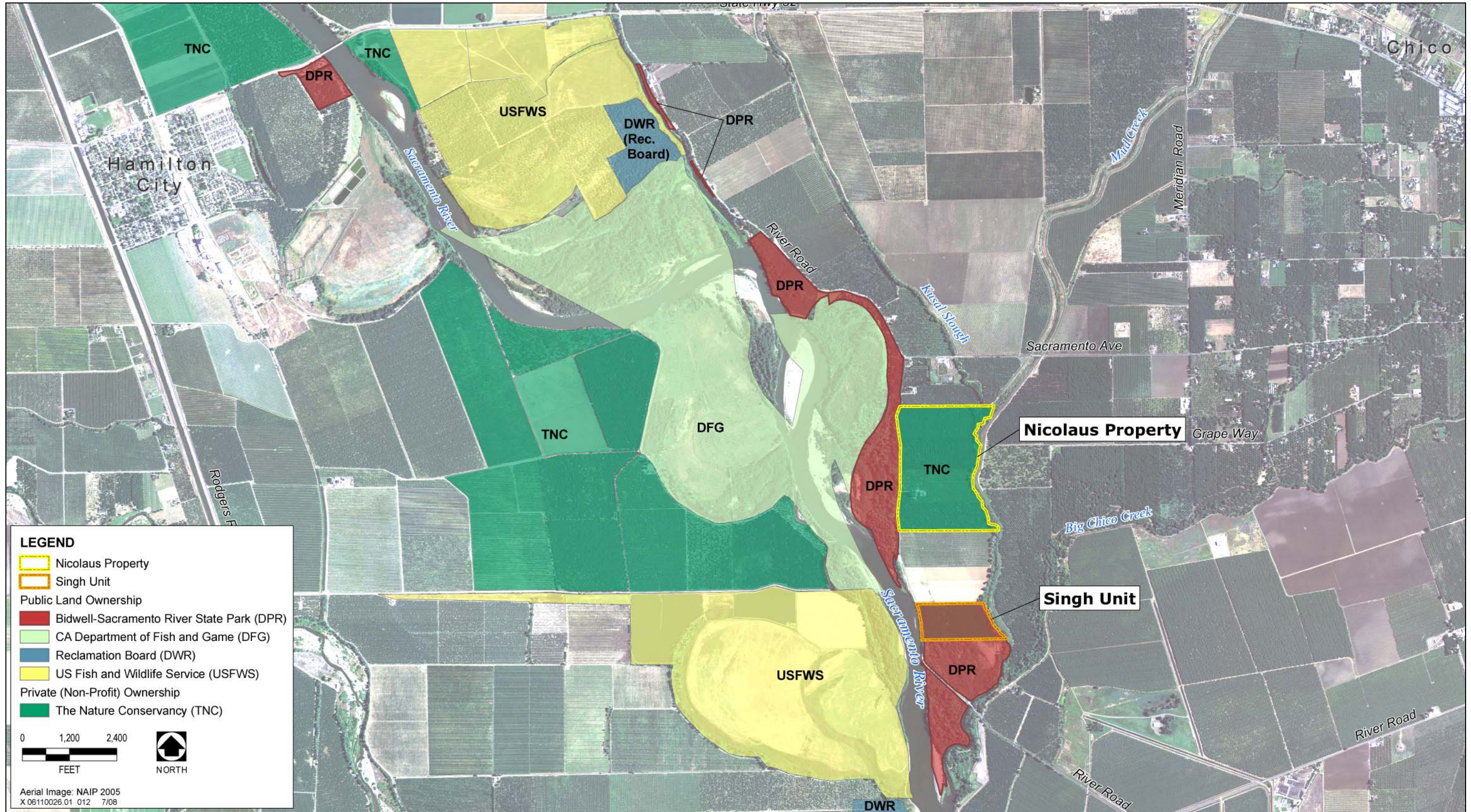
A portion of the USFWS Sacramento River National Wildlife Refuge (SRNWR) is located in proximity to the project site, between the Irvine Finch and Pine Creek Landing subunits of BSRSP. A Comprehensive Conservation Plan (CCP) for the SRNWR was completed in July 2005 (USFWS). The CCP guides management of the SRNWR for the next 15 years. The SRNWR's mission is to preserve, restore, and enhance riparian habitat for threatened and endangered species, and other wildlife and vegetation. Compatible recreation opportunities in the SRNWR identified in the CCP include hunting, fishing, hiking, wildlife observation, environmental education, and nature interpretation.

3.3.2 LOCAL GENERAL PLANS AND BICYCLE PLANS

BUTTE COUNTY GENERAL PLAN

The project site is located in unincorporated portions of Butte County. The Butte County General Plan designation in the project vicinity is OFC – orchard and field crops, 5–40 acres, and the zoning for the project site is A-160, which is agriculture with a minimum parcel size of 160 acres. Non-agricultural uses allowed with this zoning designation include seasonal hunting and fishing camps and recreational uses not requiring permanent improvements. The Butte County General Plan is currently applicable to the Nicolaus property. The Singh Unit is owned by the State. While the State is not bound by local general plan and zoning designations, State Parks seeks to maintain good coordination with the County about land uses on State property. Once transferred to State Parks' ownership, the Nicolaus property will no longer be subject to the Butte County General Plan.

The Butte County General Plan was adopted over a period of several years, from 1971 to 1995. In 2005, Butte County produced the Butte County General Plan Technical Update (GPTU) Background Report, which



Source: GIC 2003, State Parks 2003

Public and Non-profit Land Ownership in the Project Area

Exhibit 3-6

inventoried and analyzed existing conditions and trends in Butte County, providing formal supporting documentation for General Plan policy. Elements in the General Plan that are most applicable to the Nicolaus property include Land Use, Conservation, Open Space, Recreation, and Agriculture. The General Plan Land Use Element contains goals and policies for recreation facilities, open space, scenic areas, biological habitat, natural areas, archaeological resources, and flood hazards. The Conservation Element includes a discussion of flood control, soils and soil erosion, wildlife and fisheries. The Open Space Element addresses agricultural lands, timber land, water resource areas, wildlife habitat, and open space for outdoor recreation. In addition, the County Board of Supervisors directed the preparation of a separate Agricultural Element in 1994 to protect and maintain agriculture as a major part of the local economy and way of life. The Agricultural Element establishes policies designed to preserve agricultural lands, strengthen and support the agricultural sector of the economy, protect the natural resources that sustain agriculture, and consolidate agricultural policies required in mandated general plan elements. The County is currently in the process of preparing a comprehensive update to the general plan to be completed in 2009.

BUTTE COUNTY BIKEWAY MASTER PLAN

The Butte County Area Governments, in coordination with the Butte County Public Works Department, prepared a Bikeway Master Plan for Butte County, which was adopted in 1998. This document focuses on countywide bikeway connections, and incorporates the proposed bike plans for each of the cities within the county. In the vicinity of the project site, the Bikeway Master Plan identified the need for Class II bike lanes on River Road from Ord Ferry Road to SR 32 and on SR 32 to the county line (medium funding priority). Class II bike lanes provide for a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted. Caltrans standards generally require a 4-foot (1.2-meter) bike lane with a 6-inch (150-mm) white stripe separating the roadway from the bike lane. Although River Road and SR 32 are used by bicyclists, bike lanes have not yet been developed and no funding has been identified for the proposed lanes. The County is scheduled to update the Bikeway Master Plan in 2007.

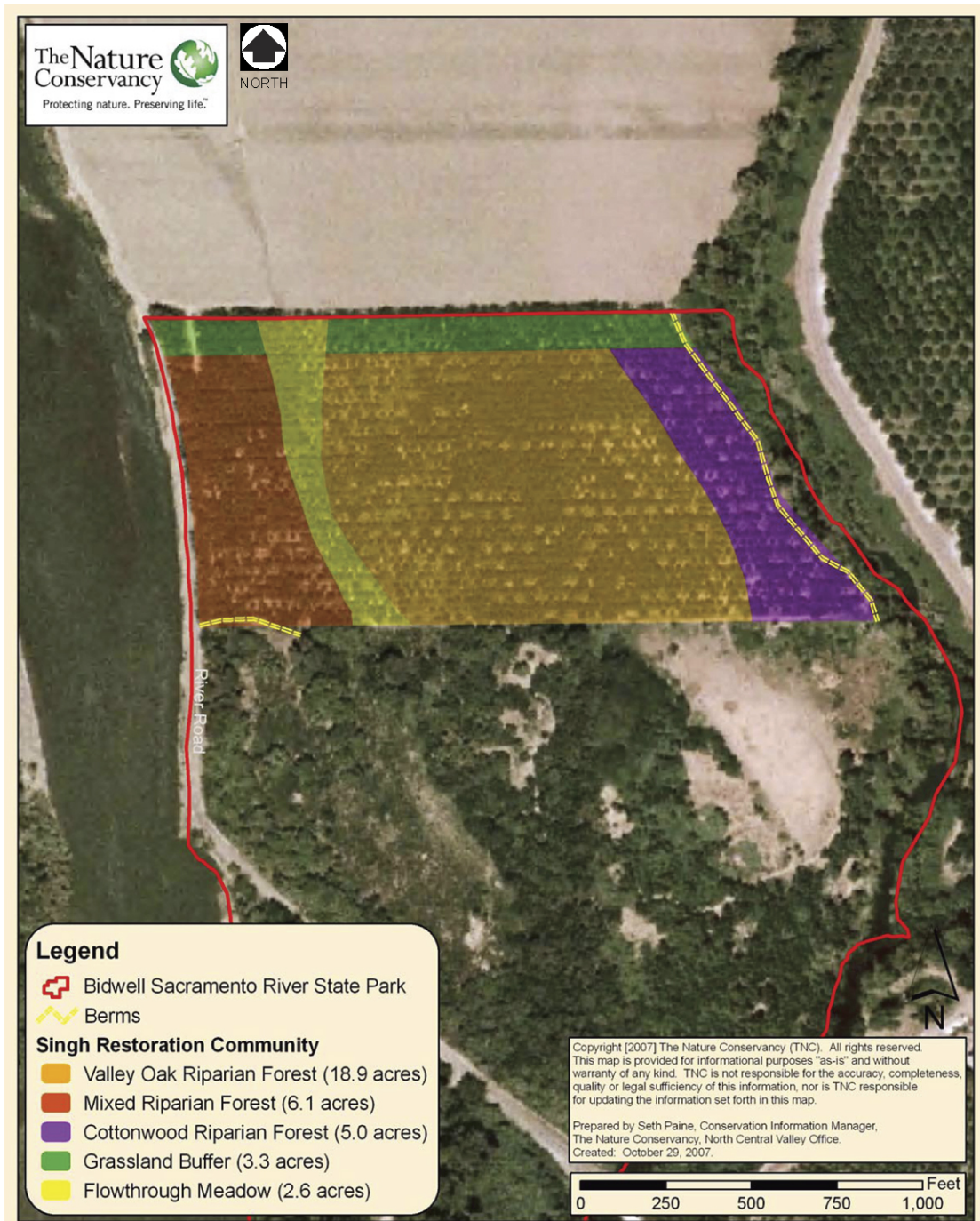
3.4 PROPOSED PROJECT CHARACTERISTICS

3.4.1 RELOCATION OF BSRSP HEADQUARTERS

After transfer of the Nicolaus property from TNC to State Parks, the current BSRSP headquarters (i.e., administrative facilities) would be relocated from its current location west of River Road in the Indian Fisheries subunit to the existing farm complex on the Nicolaus property. The buildings, fencing, and equipment would be removed from the current headquarters location and the site would be modified to accommodate day-use activities as described in the BSRSP General Plan (State Parks 2003). The new Park headquarters on the Nicolaus property would utilize the existing farm buildings on the site. The two existing barns would potentially be used for maintenance equipment storage; the farmhouse and two other existing buildings would be converted or replaced and used for offices for permanent and seasonal Park staff, including rangers and maintenance staff. The converted or replaced farmhouse would also be used as the visitor contact station and would be accessible per the Americans with Disabilities Act (ADA). Any conversion of the farm buildings would include maintaining and enhancing the aesthetic ranch-character of the buildings. The maintenance yard would be fenced and paved with aggregate base course.

3.4.2 HABITAT RESTORATION

The proposed project would involve the removal of human made berms (Exhibit 3-7) on the Singh Unit and grading to match the natural topography. The project would involve revegetation and restoration of the Singh and Nicolaus parcels with native riparian communities such as cottonwood riparian forest, valley oak savannah, valley oak forest, mixed riparian forest, native grassland, and valley oak riparian forest habitats as described ~~in the~~ revised Nicolaus Property Riparian Habitat Restoration Plan, Sacramento River (RM 195) (TNC 20078-a) and



G 06110026.01 003

Source: The Nature Conservancy 2007

Singh Unit Restoration Communities

Exhibit 3-7

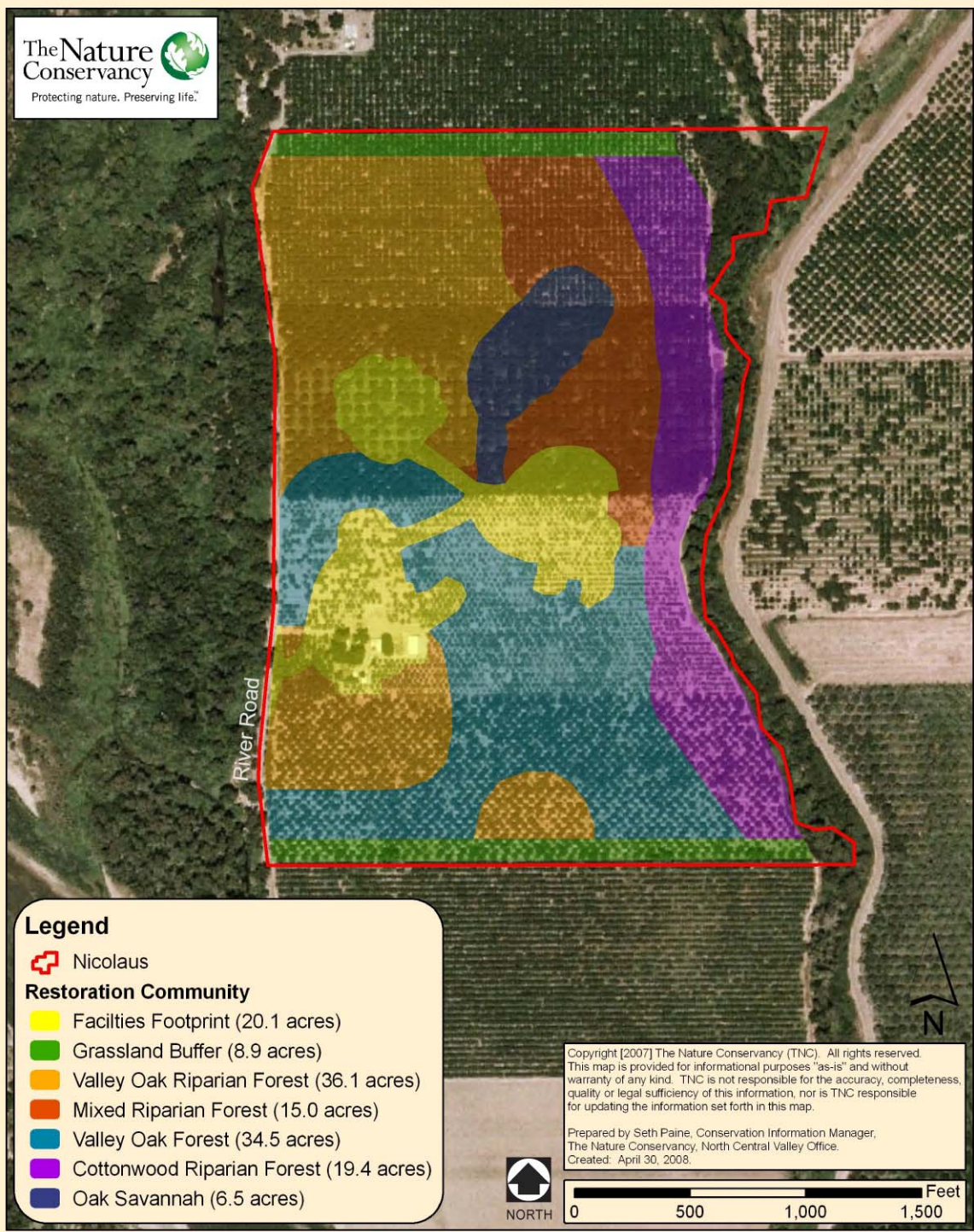
the revised *Singh Unit Riparian Restoration Plan – Bidwell Sacramento River State Park, Sacramento River (RM 194)* (TNC 2007~~8~~-b) (Appendix C). These plans were prepared based on approximately 17 years of adaptive management practices conducted by TNC on approximately 4,600 acres within the middle reaches of the Sacramento River as well as the revised *Hydraulic Analysis for Flood Neutrality on the Nicolaus and Singh Properties, Sacramento River, Mud Creek, and Big Chico Creek*~~Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties, Sacramento River RM 194–195~~, dated ~~December 2007~~May 30, 2008 (Appendix B). Exhibits 3-7 and 3-8 depict the proposed plan for the habitat restoration communities, and Table 3-2 summarizes the proposed acreages of habitat community types to be restored.

	Singh Unit	Nicolaus Property	Total Acres
Cottonwood riparian forest	5.0	19.4	24.4
Valley oak forest	0	34.5	34.5
Mixed riparian forest	6.1	15.0	21.1
Valley oak riparian forest	18.9	36.1	55.0
Oak Savanna	0	6.5	6.5
Grassland buffer	3.3	8.9	12.2
Flowthrough Meadow	2.6	0	2.6
Facilities Footprint (valley oak savanna)	0	20.1	20.1
Total Acres	35.9	140.5	176.4

Source: The Nature Conservancy 2007

To accomplish this restoration, native species would be propagated, planted, and actively maintained for a period of 3 years following the initial planting. Over time, habitat management and natural processes would control the species composition and overall structure of the plant communities. The restoration work on the ground Singh Unit would occur after the project has been approved, permits are obtained, and restoration funds are secured. The restoration work on the Nicolaus property would occur after it has been transferred from TNC to State Parks; the Williamson Act contract has been phased out, amended or a new contract has been executed, which allows for such uses; the project has been approved; permits are obtained; and restoration funds are secured. All restoration activities would comply with the noise control measures required by the Butte County Planning Department for construction-related noise. Proposed project activities for habitat restoration would include:

- ▶ Selection and propagation of native plants;
- ▶ Project site preparation, including orchard removal, debris removal, discing, grading, and removal of nonnative invasive plant species (including eucalyptus);
- ▶ Irrigation system design and installation;
- ▶ Planting of propagated container stock and direct seeding of grasses;
- ▶ Maintenance, including irrigation, plant replacement, and weed control; and,
- ▶ Monitoring and reporting.



Source: The Nature Conservancy 2007

Nicolaus Property Restoration Communities

Exhibit 3-8

Analysis of the proposed habitat restoration project activities is based on the detailed information as described in the restoration plans. Please refer to Appendix C for a more detailed description of specific approaches and prescriptions for restoration activities.

3.4.32 PUBLIC ACCESS AND RECREATION FACILITIES

In addition to the restoration and revegetation of the Singh and Nicolaus parcels, the proposed project would also include the development of public access and outdoor recreation facilities as part of the BSRSP (Exhibit 3-9). The public access and recreation facilities would not be developed until ownership of the Nicolaus property is transferred from TNC to State Parks; ~~the nonrenewal period for the Williamson Act Contract on the Nicolaus property has passed~~ been phased out, amended or a new contract has been executed to allow for such uses; ~~the project has been approved; permits are obtained;~~ and funding for detailed planning, design, and construction are secured. The Singh and Nicolaus Public Access and Recreation Concept Plan (TNC 2007) (Appendix D), would guide further planning, design, and development of outdoor recreation facilities. It incorporates trails, day-use areas, and overnight camping facilities into the areas to be restored on the Singh and Nicolaus parcels, and modifies existing ~~Park BSRSP~~ day-use facilities on the west side of River Road. Day-use facilities would include parking areas, trails and trailheads, picnic areas, restrooms, and educational and interpretive features. Overnight camping facilities would include an entry plaza; ~~recreational vehicle (RV), tent, and group camping sites;~~ restrooms; showers; dump station; and parking. State Parks would hire one additional staff person to support these new facilities.

RELOCATION OF BSRSP HEADQUARTERS

~~The proposed project would relocate the Park headquarters (i.e., administrative facilities) from its current location west of River Road to the existing farm complex on the Nicolaus property. The buildings, fencing, and equipment would be removed from the current headquarters location and the site would be modified to accommodate day use activities as described in the BSRSP General Plan (State Parks 2003). The new Park headquarters on the Nicolaus property would utilize the existing farm buildings on the site. The two existing barns would potentially be used for maintenance equipment storage; the farmhouse and two other existing buildings would be converted or replaced and used for offices for permanent and seasonal Park staff, including rangers and maintenance staff. The converted or replaced farmhouse would also be used as the visitor contact station and would be accessible per the Americans with Disabilities Act (ADA). Any conversion of the farm buildings would include maintaining and enhancing the aesthetic ranch character of the buildings. The maintenance yard would be fenced and paved with aggregate base course (ABC). The new Park headquarters would include a new 24 foot wide entrance road and parking area that could accommodate 10 oversized vehicles, such as RVs and vehicles with trailers up to 65 feet total length, and 15 regular vehicles (including 3 ADA accessible spaces); a bus turn around area; a separate new maintenance and ranger entrance and parking area; a restroom and shower building for use by campers; and an environmental education area with amphitheater and interpretive features.~~

RECREATIONAL DAY-USE FACILITIES

Recreational day-use facilities would be developed on the Singh Unit and Nicolaus property. Additional facilities would be developed on adjacent Park property as described in the BSRSP General Plan (State Parks 2003). The existing headquarters, on Park property west of River Road, would be developed into a day-use area that would include an aggregate base course ABC paved parking area that accommodates five oversized vehicles and 12 regular vehicles (2 ADA accessible spaces); restroom facilities; group picnic area with three picnic tables; seven picnic tables on concrete pads; trailhead signage; and trails connecting to other Park facilities. Development of the existing headquarters to a day-use facility was analyzed in the EIR for the BSRSP General Plan (State Parks 2003); therefore, it is not included as part of this project.

A second day-use facility would be developed by modifying an existing day-use area approximately 0.5 mile south of the existing headquarters on the west side of River Road. This day-use area is located near the new Park

headquarters site on the Nicolaus property. Modifications proposed at the existing day-use area would include an aggregate parking area that could accommodate 8 standard vehicles (including one ADA-accessible space); three picnic tables on concrete pads; and informational signage. Modification and maintenance of existing Park facilities was analyzed in the EIR for the BSRSP Preliminary General Plan (State Parks 2003); therefore, modification of the existing day-use area south of the existing headquarters is not included as part of this project.

~~The New limited day-use facilities would be constructed near the relocated new Park headquarters (at the Nicolaus farm complex) would offer limited day-use facilities~~ including: parking; visitor contact station and informational signage; environmental education and interpretive facilities, including an open-air amphitheater; a loop trail, and trail connections to other day-use areas. The new Park headquarters facilities would include a new 24-foot-wide entrance road and parking area that could accommodate 10 oversized vehicles, such as RVs and vehicles with trailers up to 65 feet total length, and 15 regular vehicles (including 3 ADA-accessible spaces); a bus turn-around area; a separate new maintenance and Park staff entrance and parking area; a restroom and shower building for use by campers; and an environmental education area with amphitheater and interpretive features.

OVERNIGHT CAMPSITES

~~Four~~ Three types of overnight camping facilities would be developed on the Nicolaus property, including: ~~RV camping,~~ vehicle camping, walk-in tent camping, and group camping. Camping facilities would be accessed via the headquarters entrance road. ~~Each~~ The vehicle camping and group camping are ~~a type of camping facility~~ would have ~~its~~ their own driving loop to access the individual campsites; ~~with the exception of the walk-in tent campground which would use the vehicle campground loop.~~ All campsites would share the use of the restroom and shower ~~shower~~ facility. The ~~three~~ four camping facility types are described below.

RV Campground

~~The RV campground would include 25 RV campsites, including four pull through sites and 21 back in sites. Each RV spur would include one 8-foot picnic table, one fire ring and grate, one electrical pedestal, and potable water hookups. The RV campground would contain two restroom facilities and one garbage dumpster.~~

Vehicle Campground

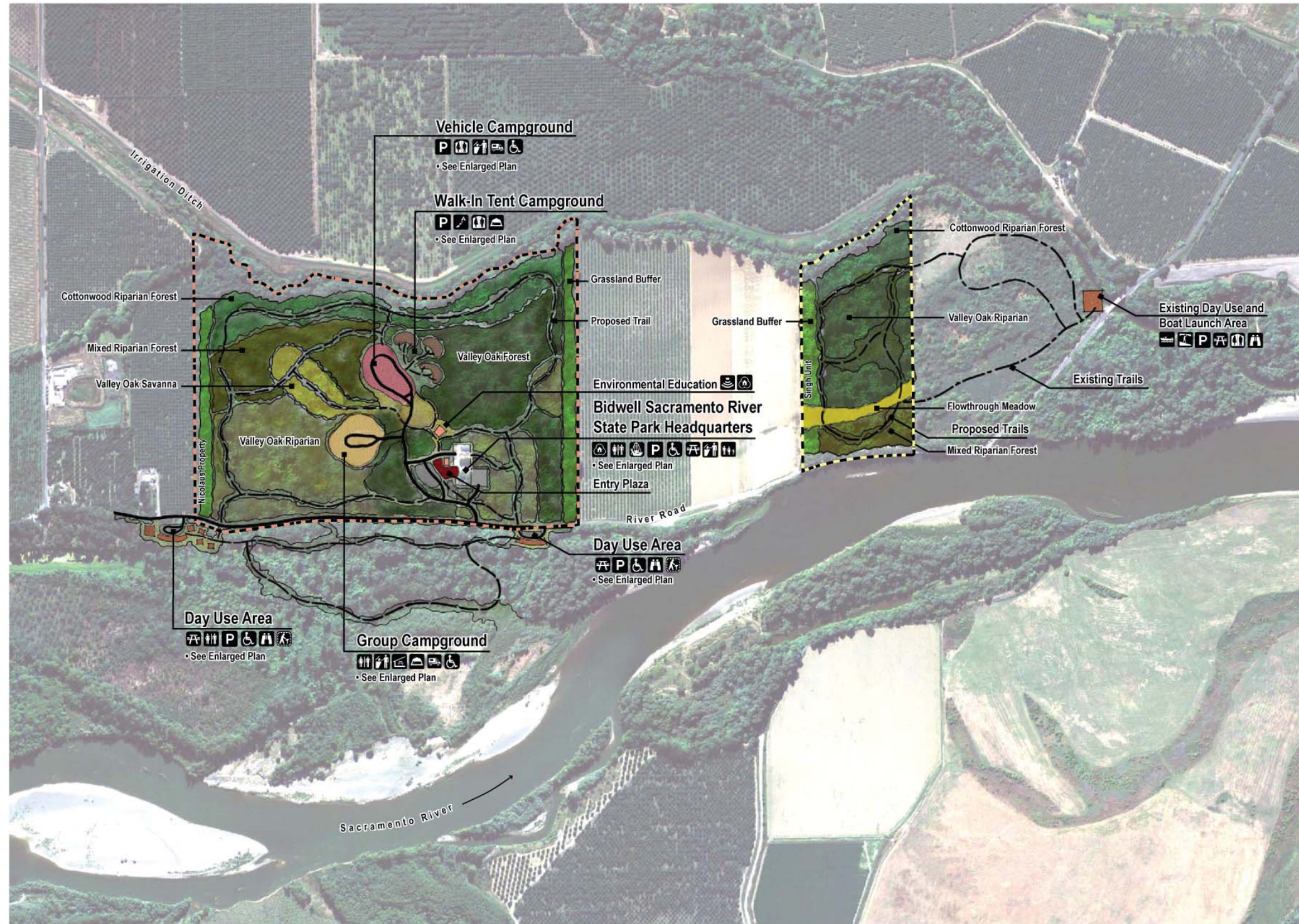
The vehicle campground would include 15 vehicle campsites, including eight back-in tent sites and seven pull-out tent sites. Each vehicle spur would include one 8-foot picnic table, one food storage locker and one fire ring and grate. Campsites would share a potable water station with neighboring campsites. The vehicle campground would contain two restroom facilities and one garbage dumpster.

Walk-in Tent Campground

The walk-in campground would include 10 tent sites accessed via trail. Each tent site would have three parking spaces available at the parking area on the vehicle campground loop. Each tent site would include one 8-foot picnic table and one fire ring and grate. Two potable water stations would be provided for use by walk-in tent sites. The walk-in campground would share the two restroom facilities and one garbage dumpster with the vehicle campground.

Group Campground

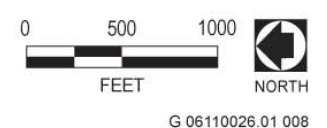
The group campground would include ~~six back in RV sites, 6 RV pull through buddy spurs, seven~~ six group tent camping pods, and four group picnic shelters (44 feet by 22 feet). Each group picnic shelter would include four picnic tables, a food storage locker and a fire ring and grate. ~~RV sites and buddy spurs would include an electrical~~



**Singh & Nicolaus
Conceptual
Public Access
& Recreation Plan**
Overall Concept Plan
August 2008

Legend

- Amphitheater
- Cartop Boat Access
- Vehicle Camping
- Walk-In Camping
- Picnic Area
- Restroom
- Showers
- Wildlife Viewing
- Accessible Facilities
- Interpretive Trails
- Vehicle Parking
- Environmental Education
- Dumpster
- Visitor Contact
- Picnic Shelter
- Tent Campground
- Grassland Buffer
- Valley Oak Savanna
- Valley Oak Riparian
- Cottonwood Riparian Forest
- Mixed Riparian Forest
- Valley Oak Forest
- Flowthrough Meadow
- Day Use Facilities
- Parking
- Existing Trail
- Proposed Trail
- Singh Boundary
- Nicolaus Boundary



Source: EDAW 2008

Singh and Nicolaus Conceptual Public Access and Restoration Plan

Exhibit 3-9

~~pedestal, and potable water hookups.~~ The group campground would contain two restroom facilities with potable water stations and one garbage dumpster. The group campground would also include a group fire ring with seating for up to 20 people.

PROPERTY BOUNDARIES

The boundaries between the project site, which would be part of State Park’s BSRSP, and private property would be clearly posted, consistent with Guideline AO-1.1-2 and AO-4.4-1 of the Park Plan. The northern boundary of the Singh Unit and the four corners (NW, NE, SW, SE) of Nicolaus property have been surveyed and marked (April 2008). The survey plat has been recorded with Butte County. State Parks would post “Park Boundary” signs as well as “No Trespass” signs along the project site boundaries with private lands. State Parks plans on locking the gate at the proposed day use area (located at the current site of the BSRSP headquarters on River Road) from sunset to sunrise. Additionally, State Parks will consider other measures to prevent trespass such as appropriate fencing or natural barriers, subject to regulatory approval.

PUBLIC ACCESS AND OUTDOOR RECREATION SPECIFICATIONS

Public access and recreation facilities would be designed and developed consistent with goals and guidelines in the BSRSP General Plan and EIR (State Parks 2003), and would follow current State Parks design standards. In addition, all construction activities would comply with the noise control measures required by the Butte County Planning Department for construction-related noise.

- ▶ **Accessibility Guidelines:** Facilities would be designed to conform to ADA guidelines and California Division of the State Architect (DSA) Accessibility Standards.
- ▶ **Restrooms:** A total of seven restroom facilities would be built. Restrooms would be pre-manufactured vault toilets suitable for occasional flooding, which could be pumped and sealed, placed on a raised pad. Architectural character to be consistent with similar facilities at other subunits with the Park.
- ▶ **Combination Restroom/Shower Building:** One combination restroom/shower building would be built. The combination restroom/shower building would be a pre-manufactured or site built building placed on a raised pad. The restroom would be connected to a septic system. The building would include a dish washing station. Architectural character to be consistent with similar facilities at other subunits with the Park.
- ▶ **Group Shelters:** A total of four group shelters would be built. Pre-manufactured picnic shelters would be placed on a raised pad. Typical dimensions would be 44 feet by 22 feet. Architectural character to be consistent with similar facilities at other subunits with the Park.
- ▶ **Roads:** Approximately 1 mile of interior road would be built. Roads would be up to 24 feet wide (two way traffic) and up to 16 feet wide (one way traffic), with a one foot of aggregate base course shoulder~~ABC shoulder~~. Pavement would be asphalt, concrete or ~~ABC~~aggregate base course. The Park Plan calls for minimal use of asphalt or concrete for the campground facilities. Aggregate base course~~BC~~ would be the preferred road surface treatment. Road grades would be elevated to maintain accessibility during flooding.
- ▶ **Parking Spaces:** Standard parking spaces would be 10 feet by 20 feet. Oversized parking spaces would be 12 feet by 65 feet. Accessible parking spaces would conform to ADA Accessibility Guidelines and California DSA Accessibility Standards.
- ▶ **Trails:** Approximately 2 miles of trails would be built. Trails would be up to 8 feet wide. Trail surface would primarily be ~~ABC~~aggregate base course and native soil, and possibly in some cases concrete or asphalt.

- ▶ **Garbage Dumpsters:** A total of four garbage dumpsters would be located within the overnight, day-use, and headquarter areas. Garbage dumpsters would be animal proof. Animal-proof waste and recycling containers would be placed throughout the Park. Garbage collection would be by contract.

- ▶ **Water:** The Singh Unit has one groundwater well with a current capacity of approximately 500 gallons per minute (Luster 2007). This well would be used to irrigate the riparian vegetation on the Singh Unit during the first three years of restoration.

Existing on-site wells would provide potable water for the campground, day-use facilities, and Park headquarters. An on-site water treatment facility would be installed to maintain acceptable water quality levels. There are currently five wells on the Nicolaus property. Four of the wells are intended for agricultural use; however, only one of the agricultural wells (located in the north-central part of the property) is used to water the entire orchard. This well has a capacity of approximately 1,800 to 2,000 gallons per minute (Luster 2007) and would be used to irrigate the riparian restoration on the Nicolaus property during the first three years of restoration. The other three agricultural wells are drilled and cased and could be functional, although they do not currently have pumps or motors. The fifth well is the existing domestic water source, with a capacity of 25 gallons per minute, which is located adjacent to the existing farm house. This domestic water well would continue to be used to serve the BSRSP headquarters (relocated to be in the farm buildings) and the recreational facilities on the Nicolaus property (Luster 2008). An on-site water treatment facility would be installed to maintain acceptable water quality levels from this domestic groundwater well as regulated by the State Division of Drinking Water.

- ▶ **Wastewater:** The facilities at the farm complex are above normal flood stage and the existing septic system/leachfield would be used to service the relocated Park headquarters. A new septic system/leachfield would be installed to service the combination restroom/shower building (in an area where annual flooding is not anticipated, such as near the farm complex). The vault toilets and RV dump station could be pumped and sealed when necessary and would be pumped by a local contractor.
- ▶ **Drainage:** Recreational facilities would be designed to allow natural drainage on the project site, similar to existing conditions. Stormwater drainage would be transported in grass-lined swales and overland flow. The recreational facilities would be designed to minimize the use of impervious surfaces.

FIRE PROTECTION

Wildland fire protection in California is the responsibility of either the State, local government, or the federal government. The project site, neighboring agricultural lands and BSRSP are located within a Local Responsibility Area (LRA). Local Responsibility Areas include incorporated cities, cultivated agriculture lands, and portions of the desert. Fire protection in LRAs is typically provided by city fire departments, fire protection districts, counties, and by the California Department of Forestry and Fire Protection (CAL FIRE) under contract to local government (CAL FIRE 2007).

Fire hazard in the LRA is evaluated by CAL FIRE. California law requires CAL FIRE to identify areas based on the severity of fire hazard that is expected to prevail there. These “zones” are based on factors such as fuel (material that can burn), slope and fire weather. There are three zones, based on increasing fire hazard: medium, high and very high. CAL FIRE uses an extension of the State Responsibility Area Fire Hazard Severity Zone model as the basis for evaluating fire hazard in the LRA. The model evaluates property using characteristics that affect the probability of the area burning and potential fire behavior in the area. Many factors are considered such as fire history, existing and potential fuel, flame length, blowing embers, terrain, weather and likelihood of buildings igniting. The LRA hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area (CAL FIRE 2007). The project site is designated as a “non-wildland fuels (e.g., rock, agriculture, water)” fire hazard zone. The neighboring BSRSP lands are designated as a “moderate” fire hazard zone (CAL FIRE 2006).

Butte County is statutorily responsible for fire, life and safety incidents at the project site due to its location in the Local Responsibility Area. The Butte County Fire Department contracts with the California Department of Forestry and Fire Protection (CDFCAL FIRE) to administer fire prevention and suppression in Butte County. The program includes full-time firefighters as well as a capably-trained contingent of volunteers who respond to every type of emergency. The closest fire station to the project site, and the first due engine, through an automatic aid agreement between Butte County and the City of Chico, would be Chico Station 6 located at 2544 State Route 32. For multiple engine responses, County Stations 41 (13871 Hwy 99, Chico), 42 (10 Frontier Circle, Chico), and 44 (2334 Fair Street, Chico) would respond. Response times from these stations are as follows:

- ▶ Chico Station 6: approximately 6 minutes 15 seconds
- ▶ County Station 41: approximately 9 minutes 11 seconds
- ▶ County Station 42: approximately 12 minutes 6 seconds
- ▶ County Station 44: approximately 14 minutes 41 seconds

Historic data for the past three (3) years indicates there have been approximately 45 calls over the three-year period in the Scotty's Boat Landing and Hwy 32/River Road area. The CDF Butte County Unit, Station #43 is located in west Chico at 2544 SR 32 and would likely be the first to respond to a call for fire prevention or protection at the project site.

Implementation of Park Plan Goal AO-2.3 and Guidelines AO-2.3.1 and AO-2.3.2 would facilitate monitoring and patrolling of the Park, which would provide the opportunity to respond to potential causes of wildfire (e.g., illegal fires). In addition, Park Plan Guideline AO-3.3-2 would restrict the use of campfires, further minimizing potential wildfire ignition, and Park Plan Guideline VU-3.7-4 would ensure the provision of information to visitors on Park rules regarding fire safety. Given these goals and guidelines, the increase in the risk of wildland fire is not expected to be substantial. Further, all facilities would be designed in compliance with the California Building Code, which requires fire safety features.

LAW ENFORCEMENT

Law enforcement services are provided concurrently by State Parks, California Highway Patrol and local law enforcement agencies, namely Butte County Sheriff Department for the portion of BSRSP in Butte County. ~~Park security is the primary responsibility of the Park Ranger serving the Park. Additionally, consistent with the Park Plan Goal AO-4.4, State Parks will work with private landowners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area.~~ Public safety and emergency services are the primary responsibility of the Park Ranger/State Park Peace Officer serving the Park. State Parks has its own law enforcement in the form of State Park Peace Officer Rangers who are California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These Rangers Peace Officers patrol State Parks and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. Additionally, consistent with the Park Plan Goal AO-4.4, State Parks will work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area.

4 ENVIRONMENTAL ANALYSIS

This chapter includes the Draft EIR text, which has been revised in concert with the responses to comments on the Draft EIR. The locations of text revisions shown with strikethrough (~~strikethrough~~) text for deletions and underline (underline) text for additions. This chapter is divided into six sections. Section 4.1 discusses the environmental topics that have been eliminated from further analysis because the project is consistent with the determination that there is no potential for significant environmental effects resulting from implementation of the project, as discussed in Park Plan’s Section 4.5, “Environmental Topics Eliminated from Further Analysis.” Section 4.1 also discusses the environmental topics that were adequately addressed in the Park Plan’s EIR analysis. As a tiered EIR, this document does not repeat the analyses in the Park Plan. However, it provides sufficient project-level detail to document why the proposed project would not result in new environmental impacts or greater environmental impacts than those disclosed (and mitigated as necessary) in the Park Plan.

Sections 4.2 through 4.6 address the five resource topics evaluated in detail in this DEIR: Agricultural Resources; Hydrology, Water Quality, and River Geomorphology; Biological Resources; Cultural Resources, and Air Quality. Each of these sections includes a subsection that discusses the *environmental setting* (i.e., existing conditions) in accordance with State CEQA Guidelines Section 15125. This information constitutes the baseline conditions with which the proposed project is compared. The *regulatory setting* subsection describes pertinent federal, state, and local laws and regulations that may apply to the proposed project. The *environmental impacts* subsection discusses potential effects of the proposed project in accordance with State CEQA Guidelines Sections 15126.2(a) and 15143. Project impacts are numbered sequentially in each subsection. The discussion that follows each impact statement includes the substantial evidence upon which the significance conclusion is based. A discussion of cumulative impacts is provided in Chapter 5. The *mitigation measures* subsection identifies mitigation measures recommended to reduce any potentially significant effects associated with the proposed project to less-than-significant levels, in accordance with State CEQA Guidelines Sections 15002(a)(3), 15021(a)(2), and 15091(a)(1). The number of each mitigation measure corresponds to the number of the impact to which it applies.

4.1 EFFECTS FOUND NOT TO BE SIGNIFICANT

4.1.1 ENVIRONMENTAL TOPICS ELIMINATED FROM FURTHER ANALYSIS

Consistent with the BSRSP General Plan and EIR (Park Plan), Section 4.5, “Environmental Topics Eliminated from Further Analysis,” the following resource topics do not warrant comprehensive analysis in this EIR because there is no potential for significant environmental effects resulting from implementation of the project. These topics include land use and planning; mineral resources; population and housing; and recreation. A brief description of these topics and why they have been eliminated from further analysis is provided below.

LAND USE AND PLANNING

The Nicolaus property and the Singh Unit are located in a rural area of Butte County outside of any established community; the City of Chico is located approximately 6 miles to the west of the project site. The Singh Unit is owned by State Parks and part of BSRSP, and the Nicolaus property would be transferred from TNC to State Parks and made part of BSRSP prior to project implementation. Because BSRSP is owned and managed by the State, it is not subject to local land use planning (i.e., county general plans and zoning). In addition, there are no federal or state land use plans applicable to the project site or the Park. As a result, no further analysis of this topic is necessary.

MINERAL RESOURCES

Neither the proposed project site nor the other BSRSP subunits are located within an area with known mineral resources, and as such they are not designated as important resource areas by the California Department of Conservation under the Mineral Resource Zone classification system. Further, the project site and BSRSP do not contain any energy production or mineral extraction land uses. Therefore, no significant effects to energy and mineral resources would occur and no further analysis is necessary.

POPULATION AND HOUSING

The proposed project would restore native riparian habitat and develop recreation facilities on lands currently planted to walnut and almond orchards. There is one home located on the project site, the Nicolaus farmhouse, which is leased to the current resident by the Nicolaus farm lessee. Although the farmhouse would remain in place, the resident would relocate as a result of the proposed project because the farmhouse would be used as the new Park headquarters building. No housing would be demolished as a result of the proposed project. Because only one resident would need to relocate as a result of the project, and there is adequate housing available in the surrounding area, the project would not result in a significant loss of housing or displacement of people.

The proposed project would not provide any new infrastructure (i.e., roads, utility connections) that could lead to additional development. State Parks may hire one new staff person in association with the proposed project. In addition, the project could increase tourism in the area, which could result in a limited indirect increase in the employment base of the local area, primarily in Chico. As of August 2007, Butte County had a total labor force of 104,800 and an unemployment rate of 6.4% (State of California 2007). Based on this data, one new State Parks staff person and any potential increase in the demand for labor due to increased tourism would be anticipated to be met by the existing local population, and therefore, no increase in population or need for additional housing is expected. As a result, no significant effects to population and housing would occur and no further analysis is necessary.

RECREATION

The proposed project would result in habitat restoration and the development of recreational facilities on the Nicolaus property and the Singh Unit, which would expand the recreation opportunities of BSRSP as proposed in

the Park Plan. Because the project would provide additional recreation facilities, it would not necessitate the construction of new recreational facilities. In addition, the project would not result in a population increase that would increase use of other existing recreation facilities or result in physical degradation of those facilities. Therefore, no significant adverse effects to recreation would occur and no further analysis is necessary.

4.1.2 ENVIRONMENTAL TOPICS REQUIRING NO FURTHER ANALYSIS

The following environmental topics do not warrant comprehensive analysis in this EIR because the proposed project is consistent with the Park Plan Goals and Guidelines and would result in less than significant effects to these resources: aesthetics; geology and soils; hazards and hazardous materials; noise; transportation and traffic; and utilities and public services. Therefore, these topics are appropriately addressed by the General Plan EIR analysis. A brief description is provided below regarding why these topics are consistent with the Park Plan conclusions and do not require further analysis.

AESTHETICS

Restoration of native riparian habitat on the project site would result in a change in the landscape from walnut and almond orchards to a mix of riparian communities (forest and grassland), a change that would generally be considered as an improvement in the existing viewshed, or that possibly would be considered by some viewers to be a neutral change. Implementation of the proposed project would involve removal of existing vegetation, which would temporarily degrade the existing visual character in the project site. Removal of the orchards and other crops would be replaced with a mixture of cottonwood mixed riparian forest, valley oak forest, mixed riparian forest, valley oak riparian forest, and native grasslands that would mature over a 3-year period to appear natural and undisturbed.

As discussed in Impact AES in Chapter 4 of the Park Plan, the General Plan anticipated the development of recreational facilities that would be visible to Park visitors and that could degrade the natural landscape and interfere with views of and from the Park. The proposed project would result in the relocation of the Park headquarters from the current location, across River Road, to the existing farm complex on the Nicolaus property and the construction of new recreational facilities on the project site. The headquarters relocation would allow for the removal of the structures, fencing, and equipment at the current Park headquarters site. Although this site would remain a day use area for the Park, the project would result in improved views of riparian habitat in BSRSP west of River Road. The new Park headquarters would be the existing farm buildings, which would remain in their current state, with minor modifications. Therefore, there would be little to no change in views of the existing Nicolaus farm buildings. The entry road on the Nicolaus property would be realigned from a straight road that runs perpendicular between River Road and the farm complex (Exhibit 3-2) to a curved road that connects to River Road at an angle and bends around the farm complex (Exhibit 3-9). This road realignment would provide additional visual buffer between the farm complex and River Road. The proposed overnight camping facilities would be developed near the center of the Nicolaus property (Exhibit 3-9) and would be surrounded by restored riparian vegetation (Exhibit 3.8), which would provide a vegetative screen between the facilities and River Road/adjacent private properties. The trails, day-use areas, and overnight camping facilities would be consistent in appearance to similar facilities in other BSRSP subunits and proposed trails would be no closer than 100 feet from private property boundaries. New nighttime lighting may be required for some of the proposed Park headquarters or campsites on the Nicolaus property (no lighting would be necessary for the trails on the Singh Unit), which may introduce a new source of light/glare to the area and adversely affect nighttime views within the Park.

Park Plan Goal ER-4.1 calls for the preservation of the natural appearance of the Sacramento River corridor and is supported by a range of guidelines. These guidelines call for the retention of riparian woodland for aesthetic values (Guideline ER-4.1-1), establishment of appropriate vegetative screening for new facilities (Guideline ER-4.1-2), and consideration of the natural aesthetics of the river when siting and designing Park signage (Guideline ER-4.1-3). Consistent with these guidelines, the proposed project would restore riparian habitat on the Singh Unit

and Nicolaus property, provide vegetative screening between the new recreational facilities and neighboring properties (including River Road), and consider aesthetics when siting Park signage. Pursuant to Park Plan Guideline ER-4.1-4, any new light/glare sources would be shielded wherever possible. It is also the intent of State Parks to support regular debris cleanup along the creeks and river, which would help maintain the aesthetic values (Guideline ER-4.1-5).

Consistent with Park Plan Impact AES, the project would implement Park Plan goals and guidelines, which minimize aesthetic effects of the project, and would result in less-than-significant impacts on aesthetics. The potential project effects on aesthetics are adequately covered in the Park Plan. No further analysis is required.

GEOLOGY AND SOILS

The project site is not designated as an Alquist-Priolo Fault study zone and no known surface faults are present under the project site; however, the project is located in a potentially active seismic region (Butte County 1977). As a result, although the potential for seismic activity in the region exists, the project site is not expected to be subject to fault rupture. In the event of a large earthquake, the project site could be subject to moderately-strong seismic ground shaking, which could result in potential structural damage to the proposed recreational facilities and the Park headquarters (in the Nicolaus farm complex). The risk of liquefaction (transformation of soils from a solid state to a liquid state during ground shaking) is high due to the presence of saturated sandy soils. Liquefaction could cause structures to sink and render them susceptible to major damage. Subsidence due to groundwater extraction could also pose a risk to developed recreational structures. However, by law, all structures developed would have to comply with the standards contained in the California Code of Regulations, Title 24 (CBC). Therefore, the proposed facilities would include structural reinforcements and other features, as required by the CBC, as necessary to avoid or minimize seismically induced structural damage.

Slopes on the project site are generally less than 2%; therefore, landslides are determined not to be a hazard. Soils on the project site consist primarily of silt loams or sandy loams that are composed of river deposits.

Although the project site is relatively flat, project-related ground-disturbing activities could result in erosion. However, consistent with Park Plan Goal ER-1.1 and Guidelines ER-1.1-1 and ER-1.1-2, the project would restore riparian vegetation, which would generally aid in minimizing erosion, and would maintain the existing vegetative buffers along the banks of Mud Creek. Additionally, the proposed recreation facilities would be designed and constructed with the use of best management practices, including measures specified in erosion-control plans (Goal ER-3.2 and Guideline ER-3.2-1, ER-3.2-2, and ER-3.2-3). Soil erosion is discussed further in Section 4.3, "Hydrology and Water Quality."

The project would include construction of a new septic system/leachfield, located in an area where annual flooding is not anticipated and designed to prevent accidental release during flood events. The characteristics of the soils at the project site are conducive to supporting specialized septic systems, such as those currently operating at the Irvine Finch and Pine Creek BSRSP subunits. The use of septic systems would not be limited by the soils at the project site.

Consistent with the Park Plan analysis of Impact GEO, because potential seismic-related impacts would be avoided or minimized through provisions of CBC, the potential erosion would be addressed through Park Plan goals and guidelines, and the project site soils are conducive to septic systems, implementation of the proposed project would result in less-than-significant impacts to geology and soils. No further analysis is required.

HAZARDS AND HAZARDOUS MATERIALS

No hazardous materials are stored on the Singh Unit. However, there are four above-ground storage tanks on the Nicolaus property: one 500-gallon diesel above-ground storage tank, one 500-gallon gas above-ground storage tank, one 1,000-gallon waste oil above-ground storage tank, and one 1,000-gallon diesel above-ground storage

tank. All four of these storage tanks would be removed and disposed in accordance with all state and federal rules and regulations as part of the proposed project. There is also a chemical storage shed on the Nicolaus property, in the farm complex, that is on a concrete slab and contains hazardous materials (Round Up, fertilizers, Abound, Goal, malathion, Dipel, rodenticide, Kocide, and Manex).

Construction of the proposed project may require the use of small amounts of hazardous materials (e.g., gasoline, diesel fuel, engine oil). Accidental spills of construction-related materials could occur during construction, resulting in contamination. However, as described in Section 4.3, “Hydrology, Water Quality, and River Geomorphology,” a SWPPP would be developed and implemented for the project. The proposed project would not involve activities that could generate hazardous emissions, but small quantities of hazardous materials such as propane, pesticides, fertilizers, and herbicides would be stored in the storage shed in the farm complex (to be the relocated Park headquarters) and occasionally used on the project site. However, replacing the existing agriculture land use with restored riparian habitat would result in a decrease in pesticide and herbicide applications. All transport, storage, and use of hazardous materials would be conducted in accordance with all state and federal rules and regulations.

Based on EPA’s Envirofacts website, the project site is not listed as a hazardous materials site and is not known to contain listed hazardous materials or waste (EPA 2006). Additionally, based on Phase I Environmental Site Assessments conducted on the Nicolaus property and Singh Unit, no sites located within the American Society for Testing and Materials (ASTM) search radius of the project site were identified within the federal or state environmental databases.

Based on Phase I Environmental Site Assessments conducted on the Nicolaus property and Singh Unit, there is no evidence of recognized environmental conditions that would cause an impact based on the proposed habitat restoration and recreational facilities development project. It is expected that pesticides have previously been used on the project site; however, the persistence of chemicals commonly used in orchards range from a few days to several months. Therefore, it is unlikely that these chemicals would still be present at the time the project site is open to the public (TNC 2001 and TNC 2005).

The project is not located within 2 miles of any schools or airports, and the project would not involve development that would be in conflict with the operation of the nearest school or airport.

Introducing new recreational facilities on the project site would increase the risk of wildland fires. In addition, riparian habitat restoration could increase the fuel load on the project site. Increased fuel load and increased recreational facilities that increase human activity, including campfires, would result in an increased risk for wildfires. Campfires would be allowed in designated areas within the proposed campgrounds on the Nicolaus property, consistent with Park Plan Guideline AO-2.3-2. Additionally, Park Plan Goal AO-2.3 and Guidelines AO-2.3-1 and 2.3-2 facilitate monitoring and patrolling of BSRSP, which would provide the opportunity to control and respond to potential illegal fires. Park Plan Guideline VU-3.7-4 would also be implemented to ensure Park visitors are provided information regarding fire safety. BSRSP also has an existing Wildfire Management Plan that addresses wildfire threats within the Park and the project would operate in compliance with this Plan.

The proposed project would not cause any road closures on public roads. Therefore, it would not conflict with an adopted emergency response plan or other emergency plan. Adequate emergency vehicle access would be maintained consistent with Park Plan Guidelines AO-2.3-1, AO-2.3-2, and AO-2.3-3.

Consistent with the Park Plan analysis of Impact HAZ, the proposed project would result in a less-than-significant impact related to risk of exposure to hazardous materials, risk of wildland fires, and emergency access. Because the project effects on hazards and hazardous materials have been adequately covered in Park Plan Impact HAZ and a SWPPP would be developed and implemented, no further analysis is required.

NOISE

The existing noise environment at the Singh Unit and Nicolaus property is defined primarily by onsite and neighboring agricultural operations, local roadway traffic on River Road, and recreational activities associated with BSRSP. Existing noise-sensitive receptors in the vicinity of the project site include a farm house located approximately 400 feet north of the Nicolaus property, and a farm house located approximately 1,200 feet southeast of the Singh Unit. The proposed project would result in temporary construction noise related to implementing the habitat restoration and constructing the recreation facilities; operational noise associated with the new recreational facilities and park visitors; and vehicular traffic. These sources are discussed separately below.

SHORT-TERM RESTORATION AND CONSTRUCTION-RELATED NOISE

Restoration and construction activities on the Singh Unit and Nicolaus property would include clearing and tree removal, site grading, paving (on the Nicolaus property only), installation of out-buildings (on the Nicolaus property only), planting of native species, and irrigation. The onsite equipment required for restoration and construction operations is anticipated to include an excavator, front-end loader, rubber-tired backhoe, grader, compactor, generator, and haul trucks. Depending on the activities conducted, individual noise equipment would generate noise levels ranging from 76 to 88 dBA at a distance of 50 feet, as shown in Table 4.1-1.

Table 4.1-1 Noise Levels of Typical Construction Equipment	
Equipment Type	Typical Noise Level (dBA) at 50 feet
Air Compressor	81
Backhoe	85
Concrete Pump	82
Compactor	82
Concrete Pump	82
Concrete Breaker	82
Truck Crane	88
Dozer	87
Generator	78
Front-end Loader	84
Asphalt Paver	88
Pneumatic Tools	85
Water Pump	76
Power Hand Saw	78
Power Shovel (Excavator)	82
Trucks	88

*All equipment fitted with properly maintained and operational noise control device, per manufacturer specifications.
Source: FTA 2006.

The simultaneous operation of the onsite construction equipment associated with the proposed project, as identified above, would result in combined average equivalent noise level (L_{eq}) of approximately 89 dBA at a distance of 50 feet. However, it is unlikely that all the equipment would be operated on a constant basis. Construction noise levels would fluctuate depending the number and types of equipment used and their respective usage rates (i.e., percent of time operated during a typical hour). Assuming default usage rates (FTA 2006, RCNM 2006), construction activity would result in hourly average noise level of 85 dBA L_{eq} at a distance of 50 feet.

Hourly performance criteria, such as L_{eq} standards or maximum standards (L_{max}), are not contained in the Noise Element of the Butte County General Plan; however, it has established a “normally acceptable” 24-hour day-night standard (L_{dn}) of 60 dBA for low-density residential land uses. The County does not have a noise ordinance and the Butte County Code contains no noise standards.

In accordance with Guideline AO-3.3-3 of the Park Plan, State Parks would ~~ensure that~~ advise its contractors ~~would comply with to meet~~ Butte County’s noise control requirements for construction activity. As provided by Butte County Planning Department staff, the following noise control measures are required for construction activity (Troaster, pers. comm., 2007):

- ▶ Construction activity shall be limited to the hours between 6:00 AM and 7:00 PM, Monday thru Friday. No construction activities shall be performed on Saturdays, Sundays, and holidays.
- ▶ All construction equipment shall be properly maintained per manufacturers’ specifications and fitted with the best available noise suppression devices (i.e. mufflers, silencers, wraps). Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power equipment.
- ▶ Construction equipment should not be left idling for more than 5 minutes.
- ▶ Stationary equipment (e.g., generators, compressors, rock crushers, cement mixers) shall be located as far as possible from noise-sensitive receptors.
- ▶ The applicant shall designate a noise disturbance coordinator, and this person’s contact telephone number shall be conspicuously posted around the project site and in adjacent public spaces. The noise disturbance coordinator shall receive all public complaints about construction-related noise, shall be responsible for determining the cause of the complaint, and shall implement any feasible measures to be taken to alleviate the problem. Additionally, in advance of noise-generating construction operations, the disturbance coordinator shall advise nearby noise-sensitive receptors of the construction schedule.

In adherence to these requirements State Parks would ensure that restoration and construction activity would not occur outside the hours between 6:00 AM and 7:00 PM. Assuming that project-related restoration and construction activity would occur during these daytime hours, the average daily noise level generated by these activities would be 85 dBA L_{dn} at a distance of 50 feet. The nearest noise-sensitive receptor is a farm house located approximately 400 feet north of the Nicolaus property’s northern boundary line and approximately 1,800 feet from the property’s center. Assuming an attenuation rate of 6 dBA per doubling of distance, restoration- and construction-related noise levels at the closest residence would attenuate to approximately 54 dBA L_{dn} at this receptor. Thus, the resultant noise level would be less than the “normally acceptable” standard of 60 L_{dn} dBA established by the Butte County General Plan for low-density residential land uses.

Construction activities occurring at the existing park headquarters and day use facility would consist of the removal of existing park headquarters office trailer, the dismantling of existing storage sheds, and the development of the site for day use activities. As with the other project construction activities, State Parks would ensure that construction at the day use area does not occur outside the hours between 6:00 AM and 7:00 PM and that Butte County noise control measures are implemented. Additionally, modifications to the existing day use facilities are not expected to require the use of heavy equipment (graders, excavators, dozers). As a result,

construction generated noise levels at the existing headquarters are not expected to exceed the Butte County Noise Element 60 dB L_{dn} standard.

Because project construction would be limited to daytime hours, and would implement all other noise control measures required by Butte County, and not generate construction noise levels that exceed any of the County's land use compatibility standards, the project would not result in a temporary substantial increase in noise levels without the project. As a result, short-term construction-related noise would be less than significant and no further analysis is required.

LONG-TERM STATIONARY-SOURCE NOISE

The proposed project would develop new overnight campgrounds and recreational day-use areas. In addition, the project would renovate existing farm structures on the Nicolaus property into the new BSRP headquarters. Noise associated with the operation of the facilities is discussed separately below.

CAMPGROUND ACTIVITY NOISE

Overnight campgrounds would provide ~~recreational vehicle (RV) camping,~~ vehicle camping, walk-in tent camping, and group camping. Noise associated with campground activities includes people conversing, children playing, and doors opening and closing. Most of these activities are mundane in nature and do not contribute to the ambient noise environment. State Parks has its own law enforcement in the form of State Park Peace Officers who are California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These Peace Officers patrol State Park recreation areas and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. These sections prohibit noise that disturbs others in sleeping quarters between 10 p.m. and 6 a.m., use of outside machinery or electronic equipment at any time which is likely to disturb others, and state that electric generators are prohibited between the hours of 8 p.m. and 10 a.m. Adherence to the State Parks quiet hours and enforcement of the CCR Peace and Quiet section by State Park Peace Officer-Rangers would limit the potential for noise disturbances during more sensitive nighttime hours. Because the proposed project would provide electrical and water services at all RV camping stalls, the use of generators and the idling of engines is not expected to occur. As a result, campground noise would be less than significant and no further analysis is required.

PARKING ACTIVITY NOISE

(In response to comments on the Draft EIR, the recreational vehicle [RV] campgrounds were removed from the recreation facilities plans [Appendix D]. The Draft EIR analysis of parking noise included RV parking spaces and concluded that the parking activity noise would be less than significant. This analysis is, therefore, very conservative. With removal of the RV campground, the parking noise would be further reduced, would not exceed the "normally acceptable" standard of 60 dBA L_{dn} and the impact would remain less than significant.)

Project-related parking would be located adjacent to the relocated park headquarters (at the existing farm complex) and at the new campgrounds on the Nicolaus property, and at designated day-use areas ~~throughout the park.~~ The largest parking area would be at the new campgrounds, which ~~collectively~~ would include parking for approximately 80 passenger vehicles, ~~and 37 RVs.~~ Based on the total number of parking spaces at the campgrounds, and a trip rate of 4.0 daily trips per campground, the campgrounds are expected to generate up to 468 daily parking events (i.e., a vehicle arriving or departing) when operating at full capacity. Assuming higher turnover rates for the new headquarters and recreational day-use facilities, according to the assumptions outlined for the air quality analysis in Appendix E, a maximum of 210 daily parking events would occur at the new headquarters/day use lot.

Based on reference noise level data, the typical Sound Exposure Level (SEL) associated with a single vehicle arriving and departing, including noise generated by the vehicle occupants and mechanical noise of the vehicle, is

approximately 72 dBA at a distance of 50 feet. Typically, maximum noise levels are 8-9 dBA less than the SEL associated with an event, or 64 dBA L_{max} at 50 feet. In order to estimate the L_{dn} for parking lot activity, the input volume must be adjusted to account for the day/night trip distribution and a 10 dBA penalty applied to noise generated during the nighttime hours (10:00 p.m. to 7:00 a.m.). Thus, the following formula is used to determine the L_{dn} generated by parking lot activity:

$$L_{dn} = SEL + 10 * \text{Log}(N_{eq}) - (10 * \text{Log}(T_{sec})), \text{ where}$$

SEL as described previously, is the average sound exposure level for a vehicle arrival and departure, N_{eq} is the number of daytime events (7 a.m.–10 p.m.) per day plus 10 times the number of nighttime events (10 p.m.–7 a.m.) per day, and

T_{sec} is the number of seconds in the desired period.

Applying this methodology, parking-generated noise levels at the campgrounds and the headquarters/day use parking lot would be 56 dBA L_{dn} and 52 dBA L_{dn} , respectively, from a distance of 50 feet. These noise levels would attenuate to less than 35 dBA L_{dn} at the nearest noise-sensitive receptor located more than 1,500 feet away. Thus, the resultant noise level would likely be less than the existing ambient noise level at this receptor and not exceed the “normally acceptable” standard of 60 dBA L_{dn} established by Butte County General Plan Noise Element for low-density residential land uses. As a result, parking activity noise would be less than significant and no further analysis is required.

GARBAGE COLLECTION NOISE

The proposed project would include four garbage dumpsters in the overnight, day-use, and headquarter areas. Smaller animal-proof waste collection and recycling containers would be placed throughout the park. Specific locations of trash collection areas are unknown; however, trash collection areas are anticipated to be located near the relocated Park headquarters, which is approximately 1,800 feet from the nearest off-site noise-sensitive receptor. Trash removal generally occurs for a period of 10 to 15 minutes, one day per week. The primary noise source associated with refuse collection is the idling refuse truck. This process results in noise levels of approximately 60–65 dBA L_{eq} over a 15 minute period, at a distance of 50 feet. Through distance alone, garbage collection noise would attenuate to 32–37 dBA L_{eq} at the nearest off-site residence. As a result, garbage collection noise would be less than significant and no further analysis is required.

OPERATIONAL TRAFFIC NOISE

(In response to comments on the Draft EIR, the RV campgrounds were removed from the recreation facilities plans [Appendix D]. The Draft EIR analysis of operational traffic noise included RV trips and concluded that the traffic noise would be less than significant. This analysis is, therefore, very conservative. However, the Draft EIR analyzed traffic noise based on a 35 mph speed limit on River Road. The correct speed limit is 55 mph. With the correction for the 55 mph speed limit and the removal of the RV campground, the traffic noise would be further reduced, would not exceed the “normally acceptable” standard of 60 dBA L_{dn} and the impact would remain less than significant.)

The existing average daily traffic volume on River Road, which provides access to the project site, is approximately 1,241 vehicles (Butte County Public Works Engineering Division 2002). ~~Based on trip generate rates used to prepare the air quality analysis (above),~~ The new campgrounds, park headquarters and day use facilities would generate a maximum of 678-553 additional vehicle trips per day during peak season. The daily traffic volume on River Road would increase to approximately 1,919-794 vehicles. Traffic noise levels with and without project-generated traffic were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). Additional input data included day/night percentages of autos, medium and heavy trucks, vehicle speeds, ground attenuation factors, and roadway widths. Table 4.1-2 presents the predicted L_{dn} noise levels at ~~50-100~~ feet from the centerline of River Road with and without the proposed project under existing conditions.

As shown in Table 4.1-2, project-generated traffic would result in a traffic noise level of approximately ~~55-58~~ dBA L_{dn} along River Road. Because the resultant noise level would not exceed Butte County’s 60 dBA L_{dn} standard at any noise-sensitive receptors, operational traffic noise would be less than significant and no further analysis is required.

Table 4.1-2 Modeled Traffic Noise Levels along River Road						
Scenario	Daily Traffic Volume	Day/Night%	Medium Truck % ²	Heavy Truck %	Speed (mph)	Predicted Traffic Noise Level, L _{dn} (dBA) 100 feet from the Roadway Centerline ¹
Existing	1,241	83/17	2.5	1.5	3555	56.44-9 dB
Existing Plus Project	1,919 794	83/17	8.01.8	1.50	3555	57.74.8 dB

Traffic noise levels were predicted using the FHWA Traffic Noise Model (FHWA RD-77-108). Modeled estimates assume no natural or human-made shielding (e.g., vegetation, berms, walls, buildings).

~~The vehicle fleet mix would change under existing plus project conditions because approximately 18% of project generated traffic is estimated to be RVs, according to the assumptions outlined for the air quality analysis in Appendix E.~~

Source: Modeling performed by EDAW in ~~2007~~2008

TRANSPORTATION AND TRAFFIC

(In response to comments on the Draft EIR, the RV campgrounds were removed from the recreation facilities plans [Appendix D]. The Draft EIR analysis of transportation and traffic included RV trips and concluded that the traffic impacts would be less than significant. This analysis is, therefore, very conservative. With removal of the RV campground, the number of vehicle trips on River Road would be reduced, the number of parking spaces would be reduced, and the impact to traffic and circulation would remain less than significant.)

Access to the project site is provided by public roadways, including River Road serving the east side of the Sacramento River and SR 32 serving the west side of the river. In addition, West Sacramento Avenue, a two-lane arterial road maintained by Butte County, runs into River Road, thereby linking the downtown Chico area to the project site and BSRSP. The project would not physically interfere with or modify any of the public access roads in the vicinity of the project site. Temporary construction and habitat restoration activities would involve a limited number of truck trips that would not pose a significant change to traffic and circulation. All construction and habitat restoration staging would occur on the project site, off of existing roadways.

The existing average daily traffic volume on River Road, which provides access to the project site, is approximately 1,241 vehicles (Butte County Public Works Engineering Division 2002). The proposed project would increase recreational facilities in BSRSP and may attract additional visitation, which would increase vehicular trips along local roadways serving the Park. Based on trip generate rates (used to prepare the air quality analysis, see Appendix E), the new campgrounds, park headquarters and day use facilities would generate a maximum of 678 additional vehicle trips per day during peak season. The daily traffic volume on River Road would increase to approximately 1,919 vehicles. Most of the vehicle trips along local roadways would occur during weekends, particularly holiday weekends, and very few of the trips are expected during the peak commuter hours when LOS levels are of most concern. Park Plan Goal VU-3.2 and Guidelines VU-3.2-1 and 3.2-2 also facilitate the provision of public transportation to the Park. Furthermore, Goal AO-2.3 would facilitate coordination with Caltrans.

The access road on the Nicolaus property, connecting to River Road would be realigned as shown in Exhibit 3-9. The realignment of the access road would not result in any hazards; rather, the road would be designed to provide safer access off River Road and proper signage would be provided (consistent with Park Plan Guidelines VU-3.1-2). Use of standard farm equipment during project implementation phases would be consistent with historical

farming practices in the region that have included the presence of slow-moving farm equipment on local roadways. Implementation of the proposed project would not result in an incremental increase in this type of hazard. No emergency access routes would be impaired as a result of the proposed project.

The project site is not located within an airport land use plan or within 2 miles of a public or private airport. Therefore, the project would not have the potential to affect air traffic patterns or result in substantial safety risks associated with airports.

Parking areas would be constructed for day use facilities, overnight camping facilities, and Park headquarters. The largest parking area would be at the new campgrounds, which collectively would include parking for approximately 80 passenger vehicles and 37 RVs. Based on the total number of parking spaces at the campgrounds, and a trip rate of 4.0 daily trips per campground, the campgrounds are expected to generate up to 468 daily parking events (i.e., a vehicle arriving or departing) when operating at full capacity. Assuming higher turnover rates for the new headquarters and recreational day-use facilities (according to the assumptions outlined for the air quality analysis in Appendix E) a maximum of 210 daily parking events would occur at the new headquarters/day use lot. The proposed parking is expected to be adequate to serve the increase in visitation to the project site and would be consistent with Park Plan Goal VU-3.3.

Consistent with the Park Plan analysis of Impact TRANS, the proposed project would result in a less-than-significant impact related traffic and circulation. The project effects on traffic and circulation have been adequately covered in the Park Plan. No further analysis is required.

UTILITIES AND PUBLIC SERVICES

The Singh Unit has one groundwater well with a current capacity of approximately 500 gallons per minute (Luster 2007). There are five groundwater wells on the Nicolaus property. Four of the wells are intended for agricultural use; however, only one of the agricultural wells (located in the north-central part of the property) is used to water the entire orchard. This well has a current capacity of approximately 1,800–2,000 gallons per minute (Luster 2007). The other three agricultural wells are drilled and cased and could be functional, although they do not currently have pumps or motors. The fifth well is the existing domestic water source, with a capacity of approximately 25 gallons per minute, which is located adjacent to the existing farm house. This domestic water well would continue to be used to provide potable water to the BSRSP headquarters (relocated to be in the farm buildings) and the recreational facilities on the Nicolaus property. An onsite water treatment facility would be installed to maintain acceptable water quality levels from this domestic groundwater well as regulated by the State Division of Drinking Water.

~~There is one existing on-site groundwater well on the Nicolaus property, with an estimated capacity of 2,000 gallons per minute. There is also one existing groundwater well on the Singh Unit with an estimated capacity of 500 gallons per minute. The groundwater well on the Singh Unit and the functional agricultural well on the Nicolaus property se groundwater wells currently provide irrigation for the orchards. Under the proposed project, these wells would provide irrigation during the 3-year establishment period for the habitat restoration, and potable water for campgrounds, day-use facilities, and Park headquarters. Based on experience at other habitat restoration sites, it is anticipated that the ground-water wells would have more than sufficient capacity to serve the proposed project. Based on a conservative estimate of water usage, during the first year of the habitat restoration, the irrigation water would be roughly equivalent to that used for the orchards; during the second year the water use would be half of that used on the orchards; during the third year it would be roughly a quarter of that used on the orchards; and thereafter no water would be used for irrigating the restored habitat. For the potable water, an on-site water treatment facility would be installed to maintain acceptable water quality levels. If, in the future, the groundwater wells are no longer productive and/or no longer necessary to support the restoration area, they would be properly decommissioned according to Department of Water Resources' specifications (filled and capped). The decommissioning would prevent infiltration of floodwater into an uncapped well that could otherwise contaminate the local groundwater aquifer surrounding the well with surface contaminants carried in flood flows.~~

A total of seven restroom facilities would be constructed as part of the project. Restrooms would be pre-manufactured vault toilets placed on a raised pad that is suitable for occasional flooding. Vault toilets are impervious to water, which is why they are safe to use in floodplains and why they require pumping for maintenance. In preparation of flood events, the vault toilets would be pumped, hosed out, and sealed. By cleaning and sealing the vault toilets, these facilities do not leak wastewater during flood events. In addition, one combination restroom/shower building would be constructed. The combination restroom/shower building would be a pre-manufactured or site- built building placed on a raised pad and would include a dishwashing station. ~~At~~ The existing septic system/leachfield would be used to service the Park headquarters. A new septic system/leachfield would be installed to service the combination restrooms/shower building (in an area where annual flooding is not anticipated). These septic systems would be outside of the normal flood levels and in preparation for more extreme flood events, the check-valves at the facilities could be turned off. The project site is not served by a wastewater treatment facility; wastewater would be treated on-site using septic systems.

BSRSP monitors real-time flow conditions at upstream locations to monitor for potential flood conditions at the Park. When there is indication of potentially approaching flood levels, standard BSRSP maintenance measures are enacted, including: removing equipment and vehicles from potentially effected park and service yards to higher ground; turning off utilities (electricity, water, and gas); pumping and sealing vault toilets; and cleaning and sealing restroom/shower buildings (sand bags in toilets, urinals, floor drains and door thresholds; sink drains and door jams are duct taped; water heater removed if not installed above flood threat). Additionally, after flood events, the septic tanks are pumped (Akers 2007). As part of BSRSP, the facilities on the Singh Unit and the Nicolaus property would be subject to these maintenance measures.

~~BSRSP monitors real-time flow conditions at upstream locations to monitor for potential flood conditions at the Park. When there is indication of potentially approaching flood levels, utilities (i.e., electricity, water, and gas) are turned off; restrooms are sealed (sand bags in toilet, urinal, floor drains and door thresholds; sink drains and door jams are duct taped); and water heaters are removed if they are not installed above the flood threat. Additionally, after flood events, the septic tanks are pumped (Akers 2007).~~

A total of four garbage dumpsters would be located within the overnight, day-use, and Park headquarter areas, and garbage would be collected by a local contractor.

Recreational facilities would be designed to allow natural drainage on the project site, similar to existing conditions. Stormwater drainage would be transported in grass-lined swales and overland flow. The recreational facilities would be designed to minimize the use of impervious surfaces.

The Butte County Fire Department contracts with the California Department of Forestry and Fire Protection (CDF) to administer fire prevention and suppression in Butte County. The program includes full-time firefighters as well as a capably-trained contingent of volunteers who respond to every type of emergency. The closest fire station to the project site, and the first due engine, through an automatic aid agreement between Butte County and the City of Chico, would be Chico Station 6 located at 2544 State Route 32. For multiple engine responses, County Stations 41 (13871 Hwy 99, Chico), 42 (10 Frontier Circle, Chico), and 44 (2334 Fair Street, Chico) would respond. Response times from these stations are as follows:

- ▶ Chico Station 6: approximately 6 minutes 15 seconds
- ▶ County Station 41: approximately 9 minutes 11 seconds
- ▶ County Station 42: approximately 12 minutes 6 seconds
- ▶ County Station 44: approximately 14 minutes 41 seconds

Butte County is statutorily responsible for fire, life and safety incidents at the project site due to its location in the Local Responsibility Area. Historic data for the past three (3) years indicates there have been approximately 45 calls over the three-year period in the Scotty's Boat Landing and Hwy 32/River Road area. The County anticipates that number to rise if the project is approved as proposed.

Implementation of Park Plan Goal AO-2.3 and Guidelines AO-2.3.1 and AO-2.3.2 would facilitate monitoring and patrolling of the Park, which would provide the opportunity to respond to potential causes of wildfire (e.g., illegal fires). In addition, Park Plan Guideline AO-3.3-2 would restrict the use of campfires, further minimizing potential wildfire ignition, and Park Plan Guideline VU-3.7-4 would ensure the provision of information to visitors on Park rules regarding fire safety. Given these goals and guidelines, the increase in the risk of wildland fire is not expected to be substantial. Further, all facilities would be designed in compliance with the California Building Code, which requires fire safety features.

Law enforcement services are provided concurrently by State Parks, California Highway Patrol and local law enforcement agencies, namely Butte County Sheriff Department for the portion of BSRSP in Butte County. However, public safety is the primary responsibility of the Park Ranger serving the Park. State Parks has its own law enforcement in the form of State Park Peace Officer-Rangers who are California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These RangerPeace Officers patrol State Park recreation areas and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. Additionally, consistent with the Park Plan Goal AO-4.4, State Parks will work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area.

~~Services such as fire protection, law enforcement, and emergency medical services are provided to the Park by outside sources (see Chapter 3 of this EIR, "Description of Proposed Project," and Park Plan Chapter 2, "Park Support and Emergency Services"). It is expected that these outside sources~~ the Butte County Fire Department and Sheriff Department would have sufficient capacity to serve the proposed project because the additional visitation is not expected to be substantial, and the project would not change the population of the area. The project would not include the construction of housing and therefore would not generate additional students or increased demands on schools.

Consistent with the Park Plan analysis of Impact UTIL, the proposed project would result in a less-than-significant impact related to utilities and public services. Because the project would be consistent with Park Plan Guidelines AO-3.2-1, AO-3.2-2, and AO-3.2-3, the project would not create any new significant effects on utilities and service systems not previously addressed. Therefore, project effects on utilities and service systems have been adequately covered in the Park Plan. No further analysis is required.

4.2 AGRICULTURAL RESOURCES

This section analyzes the potential effects of the proposed project on agricultural resources. The analysis is based on a review of agricultural characteristics of lands in the study area (Exhibit 4.2-1); it is further based on consideration of proposed project actions that could result in adverse physical changes to the environment or in the degradation of physical attributes that historically supported native riparian habitat and that have supported agricultural production in more recent times. This analysis is consistent with the findings in the Recirculated EIR for the Preliminary General Plan (Agricultural Resources) (October 2005) for the Bidwell-Sacramento River State Park General Plan (Park Plan), which presented a thorough analysis of the potential impacts to agricultural resources resulting from the implementation of the Park Plan.

The proposed project actions are consistent with the Park Plan, as described in Chapter 1, “Introduction,” of this DEIR. However, while the Singh Unit was discussed in the Park Plan (Section 2.3.3), the Nicolaus property was not identified as a potential acquisition site at the time the Park Plan was prepared. Although the characteristics of the Nicolaus property are similar to other potential acquisitions (e.g., Singh Unit, Beard property, Sunset Ranch) that were discussed and analyzed in the Park Plan, and the recreation facilities proposed for the Nicolaus property are consistent with the recreation facilities proposed and analyzed in the Park Plan, this analysis is necessary to address project-specific impacts and to ensure complete analysis of the project’s potential effects on agricultural resources.

The information presented in this section is based on review of existing environmental documents and other relevant information, including aerial photography, habitat maps, and proposed restoration plans. The following documents were reviewed during preparation of this analysis:

- ▶ Butte County. 1995 (May 9). Agricultural Element of the Butte County General Plan. Oroville, CA.
- ▶ Butte County. 2007b (January). Resolution 07-021 of the Board of Supervisors of the County of Butte: Butte County Administrative Procedures and Uniform Rules for Implementing the California Land Conservation (Williamson) Act. Oroville, CA.
- ▶ Butte County. 1979 (October 30). Land Use Element of the Butte County General Plan: Chico Area Greenline Policy. Oroville, CA.
- ▶ Butte County. 1981. Butte County Right to Farm Ordinance (Ord. No. 3965). Oroville, CA.
- ▶ State Parks (California Department of Parks and Recreation). 2003 (December). *Bidwell-Sacramento River State Park Preliminary General Plan and DEIR*. Prepared by EDAW. Sacramento, CA.
- ▶ State Parks (California Department of Parks and Recreation). 2005 (October). *Bidwell-Sacramento River State Park Recirculated DEIR (Agricultural Resources)*. Prepared by EDAW. Sacramento, CA.
- ▶ State Parks (California Department of Parks and Recreation). 2006 (January). *Bidwell-Sacramento River State Park Comments and Responses to Comments on the Recirculated DEIR*. Prepared by EDAW. Sacramento, CA.
- ▶ California Bay-Delta Authority. 2005 (June). *Sacramento River–Chico Landing Subreach Habitat Restoration Project Draft Environmental Impact Report*. Prepared by EDAW, Sacramento, CA.
- ▶ U.S. Fish and Wildlife Service. 2005. *Comprehensive Conservation Plan for the Sacramento River National Wildlife Refuge*. Sacramento, CA.
- ▶ DFG (California Department of Fish and Game). 2004. *Comprehensive Management Plan for the Sacramento River Wildlife Area*. Sacramento, CA.

- ▶ TNC (The Nature Conservancy). ~~December 2007~~ April 2008. *Riparian Habitat Restoration Plan for Singh Unit Sacramento River (RM 194)*. Prepared for California Department of Parks and Recreation Bidwell-Sacramento River State Park.
- ▶ TNC (The Nature Conservancy). ~~August 2007~~ April 2008. *Riparian Habitat Restoration Plan for Nicolaus Property Sacramento River (RM 195)*. Prepared for California Department of Parks and Recreation Bidwell-Sacramento River State Park.

Documents that provided information relevant to this analysis are cited throughout this section, and corresponding references are included in Chapter 109, “References.”

4.2.1 ENVIRONMENTAL SETTING

Much of the soil in the study area is considered prime agricultural soil, which is why substantial amounts of native riparian vegetation have been cleared for agriculture. Prime soils are reflected in the mapping of “Important Farmland.” Important Farmland is defined as “Prime Farmland,” “Farmland of Statewide Importance,” “Unique Farmland,” or “Farmland of Local Importance” under the Farmland Mapping and Monitoring Program (FMMP) administered by the California Department of Conservation (DOC). The FMMP also includes “Irrigated Farmland” and “Non-irrigated Farmland” for areas where modern soil survey information does not exist, as is the case in Butte County, and for which there is an expressed local concern on the status of farmland. As illustrated in Exhibit 4.2-1, the Singh Unit and the Nicolaus property are designated as “Irrigated Farmland.”

Both the Singh Unit (approximately 43 acres) and Nicolaus property (approximately 146 acres) are currently in agricultural production. Approximately 34 acres of the Singh Unit are planted in walnuts, ranging in age from one-year replants to ten-year old trees. Approximately 104 acres of the Nicolaus property are planted in walnuts, ranging in age from six-year old trees to eleven-year old trees, and approximately 32 acres are planted in almonds, planted approximately ten years ago. The Nicolaus property includes an agricultural building complex consisting of a residence, two sheds, and a barn.

According to the 2006 Agricultural Crop Report (Butte County 2007a), 464,308 acres are in agricultural production in Butte County, of which almonds and walnuts accounted for 74,942 acres. The Singh Unit and Nicolaus property orchards (totaling approximately 170 acres of agricultural production) account for approximately 0.2% of Butte County’s almond and walnut orchards and approximately 0.04% of land in agricultural production.

4.2.2 REGULATORY SETTING

The project site is located within and adjacent to BSRSP, and is subject to the Goals and Guidelines of the Park Plan. State Parks relies on multi-agency coordination in overall operations and resource management efforts at the Park. This coordination is formalized in a Memorandum of Understanding (MOU) between State Parks, U.S. Fish and Wildlife Service, and the California Department of Fish and Game established in 2001. It applies to lands within the Sacramento River National Wildlife Refuge (SRNWR) (owned by USFWS), Sacramento River Wildlife Area (SRWA) (owned by DFG) and State Parks, and includes future property acquisitions.

The MOU formally documents the agreement between these public land management agencies to manage, monitor, restore and enhance lands managed for fish, wildlife and plants along the Sacramento River in Tehama, Butte, Glenn, and Colusa counties. It also prevents duplicative land management and property acquisition efforts.

Section 3.3.1, “Local and Regional Conservation Planning,” of this DEIR describes the regional conservation plans that these agencies have prepared, which are applicable to the project sites and surrounding lands. The plans include the Park Plan (State Parks 2003, 2005, 2006), the DFG Sacramento River Wildlife Area Comprehensive Management Plan (DFG 2004), the USFWS Sacramento River National Wildlife Refuge Comprehensive

Conservation Plan (USFWS 2005), and the Sacramento River Conservation Area (State of California Resources Agency 1989).

FEDERAL AND STATE FARMLAND PROTECTION POLICIES

Loss of farmland is an important concern that is captured by the development of federal, state and local policies calling for protection of Prime, Unique or Statewide Important Farmland. Under the Federal Farmland Protection Policy Act (FPPA)(Subtitle I of Title XI, Section 1539–1549), projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by, or with the assistance of, a federal agency. However, as the U.S. Department of Agriculture’s Farmland and Conversion Impact Rating form advises, “The purpose of the rating process is to insure that the most valuable and viable farmlands are protected from development projects sponsored by the Federal Government... Accordingly, a site with a large quantity of non-urban land surrounding it will receive a greater number of points for protection from development.” The form advises that the “LESA system (Land Evaluation-Site Assessment) is used as a tool to help assess the options for land use on an evaluation of productivity weighed against *commitment to urban development*.” (USDA Farmland Conversion Impact Rating Form AD-1006 (10-83) at pages 4 and 7. Emphasis added.)

Under the California LESA model the proposed project would not qualify as “Land Committed to Nonagricultural Use” as such land is designated as having received discretionary *development* approvals, such as a tentative subdivision map, tentative or final parcel map, or recorded development agreement. (DOC California Agricultural LESA Model 1997 Instruction Manual (Manual) at page 26). In contrast, the proposed project falls within the California LESA model definition of “protected resource lands.” The model defines protected resource lands as “those lands with long term use restrictions that are compatible with, or supportive of, agricultural uses of land. Included among them are the following: publicly owned lands maintained as park, forest, or watershed resources; and lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses” (Manual at page 28). Because this project concerns protected resource lands and not “Land Committed to Nonagricultural Use” by virtue of urban development, evaluation under the LESA Model was not deemed appropriate. Such a determination by a lead agency is consistent with CEQA Statutes Section 21095, which makes use of LESA an “optional methodology.”

AMERICAN FARMLAND TRUST MAPPING PROGRAM

In 1997, American Farmland Trust released a study that showed the geographic relationship between high quality farmland and land development pressure in the United States, using the U.S. Department of Agriculture’s National Resources Inventory. That study used the unit of Major Land Resource Areas to determine where the most threatened farmland lay throughout the United States. The map defined high-quality farmland by combining the USDA’s “prime farmland” designation (land most suitable for producing food, feed, forage, fiber and oilseed crops) with American Farmland Trust’s unique farmland definition (land used to grow vegetables, grapes and horticultural crops, including fruits, nuts and berries, that have unique soil and climatic requirements.) Then American Farmland Trust determined acreage amounts of prime and unique farmland within each of the 33,000 mapping units included in the map database.

Development is defined by American Farmland Trust as the change in urban built-up land occurring within each of the 33,000 mapping units between 1992 and 1997. Because farmland conversion is taking place in every state, the map identifies high-quality farmland that is important relative to statistical benchmarks established for each state. In addition to identifying the most intense areas of high quality farmland conversion in the nation, the map also identifies where conversion was most intense within each given state (American Farmland Trust 2007).

CALIFORNIA LAND CONSERVATION ACT OF 1965 (WILLIAMSON ACT)

Since 1965 the State has encouraged landowners to protect agriculture and open space lands via the California Land Conservation Act of 1965, commonly referred to as the Williamson Act. The State of California Department of Conservation (DOC) is responsible for interpretation and enforcement of Williamson Act restrictions and provisions. Under this law, agricultural, recreational, and other related open space uses are protected ~~with property tax incentives~~ when the landowner enters into a restrictive use contract with the ~~State~~ local administering government. As an incentive for enrolling their land in the program, landowners receive a reduction in property tax liability. Counties benefit when they formally adopt the program because they are then able to claim “Open Space Subvention Act Payments” that partially replace property tax losses associated with Williamson Act enrollees. The Williamson Act program is intended to preserve farmland, although a landowner could have other activities on the same land, including a permitted mining operation, a hunting club (without permanent facilities), or processing operations for agricultural products. Williamson Act contracts have a 10 year renewable contract term. ~~The County of Butte County administers the Williamson Act Program in Butte County.~~ Resolution 07- 021 of the Board of Supervisors of the County of Butte: Butte County Administrative Procedures and Uniform Rules for Implementing the California Land Conservation (Williamson) Act (Butte County Williamson Act Procedures) (County of Butte County 2007b) identifies the Butte County Department of Development Services, Planning Division as the lead County department for all Williamson Act program management, includingsion applications, Williamson Act contract non-renewals, and contract cancellations.

There is a Williamson Act contract on the Nicolaus property; however, there is no Williamson Act contract for the Singh Unit. Prior to habitat restoration or recreation facilities development on the Nicolaus property, the contract will either be phased out, amended or a new contract will be executed, which allows for such uses. ~~Butte County administers the Williamson Act Program, which is intended to preserve farmland although a landowner could have other activities on the same land, including a permitted mining operation, a hunting club (without permanent facilities), or processing operations for agricultural products. Williamson Act contracts have a 10-year renewable contract term.~~ Since 2000, Williamson Act Program enrollment in Butte County has increased 3,661 acres, to a total of 215,248 acres (based on 2005 figures) (DOC 2006).

BUTTE COUNTY GENERAL PLAN

Butte County addresses the protection of agriculture in its General Plan as follows:

Agricultural Element

Recognizing the importance of protecting and maintaining agriculture as a continuing major part of the local economy and way of life in Butte County, the Board of Supervisors directed the preparation of an Agricultural Element to the General Plan (Butte County 1995). The Agricultural Element was adopted on May 9, 1995, establishing policies designed to achieve four main purposes:

- ▶ to preserve agricultural lands for continued agricultural uses;
- ▶ to strengthen and support the agricultural sector of the economy;
- ▶ to protect the natural resources that sustain agriculture in Butte County; and,
- ▶ to consolidate agricultural policies required in mandated general plan elements into one document.

The Agricultural Element describes several issues and challenges affecting the viability of agriculture in Butte County, such as leapfrog development, subdividing agricultural parcels into smaller units, conversion of agricultural land to urban development or rural residential “ranchettes,” trespass and vandalism, environmental regulations, and water availability. The Agricultural Element addresses these issues through specific goals, policies, and programs to ensure continued agricultural productivity unhindered by development pressures. The established goals are goals set the ideal for the element, and include the following:

Goal 1. Maintain parcel sizes that ensure the long-term preservation, conservation and continuity of those general plan areas identified as Orchard and Field Crops and Grazing and Open Lands.

Goal 2. Conserve and stabilize agricultural land uses at city and community boundaries in order to protect agricultural lands from encroachment and conversion to urban uses.

Goal 3. Support the management of agricultural lands in an efficient, economical manner, with minimal conflict from non-agricultural uses.

Goal 4. Encourage environmental resource protection measures to ensure the continued agricultural use of the land.

Goal 5. Seek and support preservation policies and programs to protect long-term agricultural production.

Goal 6. Seek measures to preserve and maintain agriculture and encourage new agricultural industries and operations.

Goal 7. Support appropriate amounts of farm worker and farm family housing in agriculturally zoned areas.

Land Use Element – Chico Area Greenline Policy

The Land Use Element of the Butte County General Plan, as adopted by Resolution 79-222, on October 30, 1979, contains the Chico Area Greenline Policy (Butte County 1979). The policy establishes and defines the “Chico Area Greenline” as the established boundary line which separates urban/suburban land uses from agricultural land uses in the Chico area. The stated purposes of this policy are as follows:

- ▶ To define the limits of future urban development which may occur on agricultural lands in the Chico Area of Butte County.
- ▶ To provide for the long-term protection of agricultural resources of the Chico Area of Butte County.
- ▶ To mitigate the threat to agricultural resources posed by urban encroachment into and conversion of agricultural lands in the Chico Area of Butte County.
- ▶ To reduce agricultural/urban conflicts in the Chico Area of Butte County.
- ▶ To establish County cooperation with the City of Chico in land use planning of urban and agricultural lands located in the Chico Area of Butte County.
- ▶ To identify urban development limits in or near agricultural lands within the County’s Chico Area Land Use Plan by use of a certain bold dashed boundary line.
- ▶ To establish a certain and clear policy text for Butte County’s Chico Area Land Use Element, which will enhance and uphold the aforementioned boundary line and policy text.
- ▶ To establish certain land use designations for the Chico Area of Butte County in conformity with the aforementioned boundary line and policy text.

In order to implement the Chico Area Greenline Policy, properties on the agricultural side of the boundary line were zoned or rezoned by the County to support the policy. The policy stipulates that all land uses on the agricultural side of the Chico Area Greenline consist solely of Agricultural land uses as provided by the Orchard and Field Crop designation, except for Agricultural Residential land uses.

Butte County Right to Farm Ordinance

In 1981, the Butte County Board of Supervisors adopted the Butte County Right to Farm Ordinance (Right to Farm Ordinance). The purpose and intent of the Right to Farm Ordinance is to limit the circumstances under which properly conducted agricultural operations on agricultural land in Butte County may be considered a nuisance, as well as:

“... to promote a good-neighbor policy by requiring notification of owners, purchasers, residents, and users of property adjacent to or near agricultural operations on agricultural land of the inherent potential problems associated with being located near such operations, including, without limitation, noise, odors, fumes, dust, smoke, insects, operation of machinery during any time of day or night, storage and disposal of manure, and ground or aerial application of fertilizers, soil amendments, seeds and pesticides. It is intended that, through mandatory disclosures, owners, purchasers, residents and users will better understand the impact of living or working near agricultural operations and be prepared to accept attendant conditions from properly conducted agricultural operations as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector.”(35-2[c])

The Right to Farm Ordinance further states that:

“No agricultural operation conducted or maintained on agricultural land in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the county, shall be or become a nuisance for purposes of this code or county regulations if it was not a nuisance when it began, provided that such operation complies with the requirements of all applicable federal, state, and county statutes, ordinances, rules, regulations, approvals and permits. The provisions of this section shall not apply where a nuisance results from the negligent or improper management or operation of an agricultural operation. (Ord. No. 3965, § 6, 6-12-07)” (35-6)

Agriculture and Crop Land

- ▶ ~~Policy B: Retain in an agricultural designation on the land use map areas where location, natural conditions and water availability make lands well suited to orchard and field crop use, while considering for non-agricultural use areas where urban encroachment has made inroads into agricultural areas and where past official actions have planned areas for development.~~

4.2.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Information useful for developing thresholds of significance for determining whether an agricultural land conversion creates a significant environmental effect was reviewed, including the State CEQA Guidelines and other CEQA documents addressing the topic.

Appendix G of the State CEQA Guidelines is a “checklist” of sample questions to aid lead agencies in determining whether a project could cause potentially significant environmental impacts. The “Agriculture Resources” section of the Appendix G checklist provides examples of land use changes as a way of aiding lead agencies in determining whether impacts to agricultural resources result in significant environmental effects. The checklist asks whether the project would:

- ▶ Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Important Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;

- ▶ Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
- ▶ Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Important Farmland, to non-agricultural use.

Although land use changes are not, in and of themselves, significant effects on the environment, changes from less-intensive to more-intensive uses can be indicators that physical effects may be reasonably foreseeable, including indirect and secondary effects. As stated in the CEQA Guidelines definitions, “effects” includes:

Indirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include *growth-inducing effects and other effects related to induced changes in the pattern of land use*, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems. (CEQA Guidelines Section 15358(a)(2). Emphasis added.)

Therefore, the threshold question is not whether there will be a land use change, but whether the land use change will result in a potentially significant adverse impact on the physical environment. The “environment” is defined as land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. (CEQA Guidelines Section 15360.) Although the “environment” includes “both natural and man made conditions,” the Guidelines acknowledge that current “natural conditions, including ecosystems” can in fact be man-made.¹

For this analysis, the project would be considered to have a significant effect on agricultural resources if it would:

- ▶ Result in a permanent conversion of a substantial acreage of Prime, Unique, or Statewide Important Farmland. A permanent conversion is considered to be one that involves the irreversible change to land uses that would cause serious degradation or elimination of the physical conditions or natural processes that provide the land’s resource qualities for agriculture and/or require expenditures of substantial development costs that would likely preclude future conversion back to agricultural uses if the opportunity for such conversion were to arise (CBDA 2005).

4.2.4 IMPACT ANALYSIS

IMPACT 4.2-a **Change of Land Use from Agricultural Land to Restored Native Riparian Habitat and Developed Recreational Facilities.** *The proposed project would restore agricultural acreage to native riparian habitat and develop outdoor recreation facilities, effectively removing the land from agricultural production. However, the proposed project would neither be 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**.*

Implementation of the proposed project would result in a change in land use in areas designated as “Irrigated Farmland,” which are currently in agricultural production (almond and walnut orchards). The Singh Unit would be restored to natural vegetation conditions with a trail connecting to other BSRSP facilities. The Nicolaus property would support a combination of restored natural vegetation and low-intensity, outdoor recreation uses. This change in land use could have a minor economic effect related to a reduction of local crop production.² As described above, 464,308 acres are in agricultural production in Butte County, of which almonds and walnuts

¹ For example, man-made agricultural drainage and irrigation canals can constitute critical riparian habitat for the giant garter snake (GGS) (*Thamnophis gigas*), a threatened species under both the Federal and State Endangered Species Acts. As stated in the *Natomas Basin Habitat Conservation Plan, Sacramento and Sutter Counties* (City of Sacramento 2003): “After emergence from winter retreats, which occurs by late March or early April, GGS utilize canals with water that persists through the summer months. Many of the canals contain adequate emergent aquatic vegetation and steep, vegetated banks that provide cover and an abundant food supply of small fish, tadpoles and frogs.” (*Natomas Basin HCP – Biological Data*, at p. II-9.)

² An economic or social change by itself is not considered a significant effect on the environment (CEQA Guidelines Section 15382).

accounted for 74,942 acres (Butte County 2007a). The Singh Unit and Nicolaus property orchards (totaling approximately 170 acres of agricultural production) account for approximately 0.2% of Butte County's almond and walnut orchards and approximately 0.04% of land in agricultural production. However, the change from commercial uses to non-commercial uses (i.e., the change from walnuts to native vegetation) would not substantially diminish the land, soils or open space values of the physical resource, nor would they preclude future agricultural use of the land or preclude nearby agricultural uses, as described below.

Conversion of Agricultural Land and Relationship to CEQA

The proposed riparian habitat restoration and outdoor recreation facilities on the Singh Unit and the Nicolaus property do not constitute a conversion of farmland resulting in potentially significant adverse environmental impacts as defined in CEQA and the State CEQA Guidelines. In the American Farmland Trust's mapping program, the assessment of loss of farmland (i.e., conversion) evaluates the acres of farmland converted to developed uses (American Farmland Trust 2007). The definition of "development" uses the term, "urban and built-up areas" from the National Resource Inventory, which is described as follows:

- ▶ **urban and built-up areas:** A land cover/use category from the National Resources Inventory that includes residential, industrial, commercial, and institutional land; construction sites; public administrative sites; railroad yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment plants; water control structures and spillways; other land used for such purposes; small parks (less than 10 acres) within urban built up areas; and highways, railroads and other transportation facilities if they are surrounded by urban areas.

Similarly, the term "urban and built up land" is also used in the California DOC's FMMP. The proposed habitat restoration and outdoor recreation facilities do not fit this definition of urban and built-up land. Therefore, the planned uses do not qualify as "conversion" to development.

At the federal level, the Federal Farmland Policy Protection Act (FPPA) requires consideration of whether federal actions would lead to the conversion of agricultural lands to non-agricultural uses. While the statute does not include a definition of "non-agricultural uses," the procedures established by the Natural Resources Conservation Service (NRCS) for assessing farmland conversion impacts provide some insight. NRCS created Form AD 1006 to provide a "Farmland Conversion Impact Rating" to Federal actions. In assessing conversions, the form defines uses as "urban," which detract from agricultural land values in the rating system, and "non-urban uses," which create or protect agricultural land values in the rating system. The definition of "non-urban uses" includes: agricultural land; range land; forest land; non-paved parks and recreational areas; rural roads; lakes, ponds and other water bodies; open space; and wetlands, among other similar uses. Urban uses include houses, apartments, commercial and industrial buildings, paved recreation areas (e.g., tennis courts), and other urban development (NRCS 1983). The proposed project would not result in "urban" uses, but would fall within the "non-urban" use category (i.e., non-paved parks and recreational areas, rural roads, other water bodies, open space, and wetlands) that creates or protects agricultural land values. Therefore, the ultimate physical conditions of the Singh Unit and the Nicolaus property resulting from the proposed project would be protective of agricultural land values, as considered by the procedures implementing the FPPA.

In addition, the LESA Model (referenced in Appendix G of the CEQA Guidelines) defines "Land Committed to Nonagricultural Use," as "land that is permanently committed by local elected officials to nonagricultural development by virtue of decisions which cannot be reversed simply by a majority vote of a city council or county board of supervisors." (*LESA Instruction Manual* p. 26.) The commitment to non-agricultural uses is further described as requiring a tentative subdivision map, tentative or final parcel map, or recorded development agreement. Each of these descriptors involves an urban development action; however, no urban development would occur under the proposed project.

In contrast, the proposed riparian habitat restoration and outdoor recreation facilities qualify as "Protected Resources Lands" (*LESA Instruction Manual* p. 28.) as follows:

Protected resource lands are those lands with long term use restrictions that are compatible with or supportive of agricultural uses of land. Included among them are the following:

- ▶ Williamson Act contracted lands
- ▶ Publicly owned lands maintained as park, forest, or watershed resources
- ▶ Lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses.

Habitat Restoration

The vast majority of the Singh Unit and Nicolaus property would be restored to native riparian habitat under the proposed project. Unlike urban development, natural vegetation restoration would represent a return to the land's original (natural) physical condition, as part of a riparian corridor, which offers long-term natural process and function benefits, including the natural formation of soils that provide these sites with their current resource values. Because the resource value of the soil is tied directly to the natural conditions and processes that existed prior to commercial agricultural cultivation, native vegetation restoration efforts would in effect be preserving (and possibly improving over time) the soil integrity (Cannon 2004).

TNC (in partnership with USFWS) evaluated the effects of agriculture and habitat restoration in the inner river zone. The findings show that in a dynamic riverine environment, the management of prime and unique farmland soils for agricultural purposes can expose them to some degree of degradation. Protection from flooding and associated sediment deposition, tilling, and the application of agricultural chemicals can adversely affect nutrient cycling, increase exposure to erosion, and inhibit natural soil microorganisms. In contrast, in restored riparian woodland, soils are improved in the values that make them valuable for farming. Brown and Wood (2002) evaluated soil development at riparian forest sites at different stages of restoration (new to mature), finding that soil bulk densities decreased as restored riparian forests matured. Higher bulk densities are evidence of soil compaction that happened over time. The lower bulk densities exhibited in mature forests is considered to result from increased biological activity in the soil, such as earthworms, beetles and small mammals aerating the soils (Brown and Wood 2002).

The proposed project would re-establish long-term processes and functions present in riparian habitat communities, including the natural formation of soils that gave the Singh Unit and Nicolaus property 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 (Brown and Wood 2002). Ceasing agricultural practices and restoring the project area could benefit adjacent and downstream agricultural lands by diminishing the volume and frequency of pesticides applied to the properties, slowing the loss of soils from the sites onto adjacent or downstream locations, and by increasing groundwater levels. Because the agricultural value of the soil is tied directly to the natural conditions and processes that existed before commercial agricultural development of the land, habitat restoration efforts would in effect be preserving (and possibly improving over time) the agricultural value of the soil (Cannon 2004, Tilman et al. 1996 and 2002).

Recreational Facilities Development

Consistent with Park Plan Guideline AO-3.2-1, the proposed recreational facilities have been designed such that they would minimize alteration of the natural landform and they would be compatible with the open space values of the area, including the resource values that support agricultural productivity. The proposed outdoor recreational facilities, which include standard trails/campground/day-use features and ancillary facilities (e.g., parking, restrooms, etc.), would include minimal paving and limited small structures (see Section 3.4.2 of the EIR). The proposed recreational facilities would be sufficiently limited in nature (i.e., small areas used for trails, parking, and camping that could be readily demolished and removed), such that it would be feasible to return the lands to another resource-based use, such as agricultural production, at some future time. Consequently, the

development of the proposed outdoor recreation facilities would not constitute agricultural land conversion in the sense of the environmental impact concerns of CEQA.

Indirect Conversion of Agricultural Land

As described above, the proposed habitat restoration and recreational facilities are non-urban uses that would be protective of and compatible with adjacent agricultural land. Additionally, the project would not include the extension of utility lines or new utility connections, which would potentially open new development pressures.

However, during the scoping and Draft EIR review processes for this project, neighboring private agricultural land owners expressed concerns regarding indirect effects of the project on their land. The project has considered and incorporated measures to avoid indirect impacts to neighboring agricultural lands as follows.

Hydrology

As described in Chapter 3, the habitat restoration plans (Appendix C) are based on hydraulic modeling (Appendix B), which takes into consideration the hydrologic regime in the project area as well as soil and ground water conditions. Please refer to Section 4.3 of this DEIR, “Hydrology, Water Quality, and River Geomorphology,” for the analysis of the project’s potential impacts related to flooding, hydrology, and water quality.

Pests

The habitat restoration plans include grassland buffers where the project site borders active agricultural land, to prevent encroachment of the riparian vegetation on neighboring agricultural land and to minimize pest concerns. The proposed grassland buffer would be approximately 100-foot wide and would be maintained by State Parks (~~mowed at least biannually~~ managed to prevent woody species establishment). A wider grassland buffer is not proposed for this project because the habitat restoration plans do not include planting any threatened or endangered plant species; therefore, a large grassland buffer is unnecessary to prevent encroachment of such species onto private property. ~~Additionally, a large grassland buffer is unnecessary to protect the restoration area from spray-drift from adjacent agricultural activities.~~ Furthermore, grassland buffer zones may not be effective against all possible pests. In general, a maintained vegetated grassland buffer of ~~mowed grass~~ may be effective in preventing the exchange of codling moth between orchards and riparian forests by providing a barrier to movement, but would not be expected to deter the spread of vertebrate pests such as California voles, Botta’s pocket gopher, or California ground squirrel, or the invertebrate pest, western tarnish bug (aka Lygus bug). In contrast, it is possible that to reduce California ground squirrel, California vole, and Lygus bug population sizes, a more appropriate buffer would likely be a dense closed canopy shrub or tree type with low density of herbaceous plants (Colusa Pest and Regulatory Effects Study; EDAW 2007).

Additionally, the proposed campgrounds and BSRSP headquarters facilities would be located over 300 feet away from the property boundary with neighboring private agricultural lands. The area between the campgrounds and the property boundary is proposed to include restored riparian forest, grassland buffer, as well as Mud Creek along the eastern boundary of the project site. The proposed recreational trails would be at least 100 feet away from the property boundary. Therefore, the project meets the intent of Butte County’s agricultural buffer setback and a larger grassland buffer is unnecessary to protect the restoration area from spray-drift from adjacent agricultural activities.

Trespass

The northern boundary of the Singh Unit and the four corners (NW, NE, SW, SE) of Nicolaus property have been surveyed and marked (April 2008). The survey plat has been recorded with Butte County. The boundaries between the project site, which would be part of State Park’s BSRSP, and private property would be clearly posted, consistent with Guideline AO-1.1-2 and AO-4.4-1 of the Park Plan. State Parks would post “Park

Boundary” signs as well as “No Trespass” signs along the project site boundaries with private lands. State Parks plans on locking the gate at the day use area (located at the current site of the Park headquarters) from sunset to sunrise. Additionally, State Parks will consider other measures to prevent trespass such as appropriate fencing or natural barriers, subject to regulatory approval.

~~Additionally, the~~The proposed trails and recreational facilities on the Nicolaus property and Singh Unit would be no closer than 100 feet from private property boundaries. The proposed campsites would be located in the center of the Nicolaus property, surrounded by restored riparian habitat to provide a buffer between campsites and the neighboring private property. Furthermore, as part of BSRSP, the project site would be managed and maintained consistent with the Park Plan goals and guidelines, including coordinating with public and private landowners in the project vicinity to minimize land use conflicts (Park Plan Overall Goal AO-4).

Law enforcement services are provided concurrently by State Parks and local law enforcement agencies, namely Butte County Sheriff Department for the portion of BSRSP in Butte County. ~~Park security is~~Public safety and emergency services are the primary responsibility of the ~~Park Ranger serving the Park. State Parks has its own law enforcement in the form of State Park Peace Officers Rangers~~ who are California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These ~~Ranger~~Peace Officers patrol State Parks and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. Additionally, consistent with the Park Plan Goal AO-4.4, State Parks will work with private landowners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area.

Conclusion

The proposed project would not result in conversion of agricultural land to urban uses and would, therefore, not result in a loss of farmland as a resource, significant damage to soil values of the resource, or detract from the agricultural values of the resource. Additionally, the habitat restoration and outdoor recreation facilities are designed and would be managed to avoid indirect adverse primary or secondary effects on adjacent agricultural land. Based on the information presented above, State Parks concludes that the proposed project would result in a ***less-than-significant impact on agricultural resources*** within the intended meaning of CEQA and the CEQA Guidelines.

IMPACT 4.2-b ~~Williamson Act Contract Nonrenewal Cancellation~~ and Land Use Compatibility. *The Singh Unit is not in a Williamson Act contract. However, the Nicolaus property (approximately 146 acres) is currently in a Williamson Act contract. Transfer of ownership of the Nicolaus property from TNC to the State of California (i.e., State Parks) would not require a new Williamson Act contract (pursuant to California Government Code Section 51295). However, prior to the land transfer, State Parks is required to advise the Director of Conservation and Butte County of its intention to locate a public improvement on land under a Williamson Act contract (pursuant to Section 51291). Following the transfer, State Parks is required to make findings pursuant to California Government Code Section 51292 to locate a public improvement on support the cancellation the property under a Williamson Act contract for the property. Either TNC (prior to the transfer) or State Parks (following the transfer) would serve written notice of nonrenewal to Butte County, which would stop the automatic annual renewal of the contract and start the 10-year phase-out of the contract. The cancellation nonrenewal would represent a 0.07% decrease in the total acreage under Williamson Williamson Act contracts in Butte County (using data from 2005, which is the most recent data available). However, per California Government Code Section 51238.1, the proposed habitat restoration and outdoor recreational facilities would not significantly compromise the long-term agricultural capability of the Singh Unit and Nicolaus property. In addition, the habitat restoration and recreational facilities proposed are considered compatible with agriculture and therefore would have no significant adverse effects on neighboring farmland production. Therefore, this impact is considered less than significant.*

Williamson Act Contract ~~Cancellation~~ Process

The Singh Unit is not in a Williamson Act contract. However, the Nicolaus property (approximately 146 acres) is currently in a Williamson Act contract and an application for notice of no nonrenewal request has been filed with Butte County. TNC and State Parks will adhere to the local and state regulations for lands under a Williamson Act contract.

State Acquisition of Land under Williamson Act Contract – Value to the Public

Rule 6(F) of the Butte County Williamson Act Procedures (County of Butte County 2007b) states provides guidance for the County in situations when land under Williamson Act contract is acquired by the State. Rule 6(F) reads as follows:

Public Acquisition. Williamson Act contracts become void for land that is acquired by a federal, state or local government agency for necessary public uses and facilities. The California Land Conservation Act of 1965 contains policies and restrictions to avoid public acquisition of lands in agricultural preserves, with special emphasis on restricting acquisition of land subject to Williamson Act contracts or containing prime agricultural land. State and local government agencies are required to refer proposals to acquire land in agricultural preserves to the State Department of Conservation for their review and response prior to acquisition.

A stated in Government Code Section 51290(a)(b), “it is the policy of the state to avoid, whenever practicable, the location of any federal, state, or local public improvements...and the acquisition of land therefore, in agricultural preserves,” and “that whenever it is necessary to locate such an improvement within an agricultural preserve, the improvement shall, whenever practicable, be located upon land other than land under a [Williamson Act] contract.” Furthermore, a public agency proposing to acquire and/or locate improvements on land under Williamson Act contract, shall “give consideration to the value to the public...of land...within an agricultural preserve.” (Section 51290[c]).

In determining the value to the public, the Legislature finds (Section 51220):

- (a) That the preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the state’s economic resources, and is necessary not only to the maintenance of the agricultural economy of the state, but also for the assurance of adequate, healthful and nutritious food for future residents of this state and nation.
- (b) That the agricultural work force is vital to sustaining agricultural productivity; that this work force has the lowest average income of any occupational group in this state; that there exists a need to house this work force of crisis proportions which requires including among agricultural uses the housing of agricultural laborers; and that such use of agricultural land is in the public interest and in conformity with the state’s Farmworker Housing Assistance Plan.
- (c) That the discouragement of premature and unnecessary conversion of agricultural land to urban uses is a matter of public interest and will be of benefit to urban dwellers themselves in that it will discourage discontinuous urban development patterns which unnecessarily increase the costs of community services to community residents.
- (d) That in a rapidly urbanizing society agricultural lands have a definite public value as open space, and the preservation in agricultural production of such lands, the use of which may be limited under the provisions of this chapter, constitutes an important physical, social, esthetic and economic asset to existing or pending urban or metropolitan developments.

- (e) That land within a scenic highway corridor or wildlife habitat area as defined in this chapter has a value to the state because of its scenic beauty and its location adjacent to or within view of a state scenic highway or because it is of great importance as habitat for wildlife and contributes to the preservation or enhancement thereof.
- (f) For these reasons, this chapter is necessary for the promotion of the general welfare and the protection of the public interest in agricultural land.

In consideration of the value to the public of the proposed project pursuant to Section 51220, State Parks could make the following findings. The proposed project is consistent with State Parks' Central Valley Vision process, which provides recommendations for park acquisition, development, and program activities over a 20-year planning horizon (DPR 2007). During the Central Valley Vision planning process, which began in 2003, State Parks found that there are significant resource protection and recreational opportunities and programs in the Central Valley through which State Parks can better serve the needs of Valley residents and visitors (DPR 2007). Recognizing and responding to the rapid population growth anticipated in the Central Valley over the next 20–30 years, the dearth of State Park facilities in the Central Valley, and the increasing diversity of visitor needs and interests, State Parks is working to expand and improve park facilities and recreation programs at Central Valley State Park System units, including BSRSP. Public input during the Central Valley Vision planning process found a strong interest in river access with adjacent day-use and camping facilities, as well as preservation of riparian habitat (DPR 2007). Acquisition of the Nicolaus property, and subsequent habitat restoration and development of outdoor recreation facilities would address public interests expressed during State Parks' Central Valley Vision planning process. Additionally, as discussed in Sections 3.1.3, 3.1.4, and 3.3.1 of this EIR, the proposed project is a product of a number of policies, programs and activities focused along the Sacramento River over the last 20 years at multiple levels of government. The implementation of these programs represents a significant public investment in the protection and restoration of riparian habitat. The efforts began in 1986, when the State of California legislature passed into law SB 1086, calling for development of a management plan for the Sacramento River and its tributaries. This set into motion an effort to protect, enhance and restore fisheries and riparian habitat that has become a model for the State. SB 1086 resulted in publication of the *Sacramento River Conservation Area Forum Handbook* (SRCA Forum 2003) that contains a set of principles and guidelines for habitat management along the river. SB 1086 also led to the formation of a nonprofit organization, the SRCA Forum, to coordinate the habitat restoration efforts along the river in accordance with guidance in the SRCA Forum Handbook.

Notification of Intent to Locate Public Improvement on Property under Williamson Act Contract

State Parks would acquire the Nicolaus property as a gift from TNC. Prior to the transfer of the Nicolaus property ~~land~~ from TNC to State Parks, State Parks would advise the Director of Conservation and Butte County of its intention to consider the location of a public improvement within property under Williamson Act contract (pursuant to Section 51291[b]). "In accordance with Section 51290, the notice shall include an explanation of the preliminary consideration of Section 51292, and give a general description, in text or by diagram, of the agricultural preserve land proposed for acquisition, and a copy of any applicable [Williamson Act] contract" (Section 51291[b]). The Director of Conservation would then forward a copy of the notice to the Secretary of Food and Agriculture for comment. Within 30 days, the Director of Conservation and Butte County would forward their comments with respect to the effect of the location of the public improvement on the land within an agricultural preserve to State Parks for their consideration (Section 51291[b]). Following acquisition of the Nicolaus property by State Parks, State Parks "shall notify the Director of Conservation within 10 working days. The notice shall include a general explanation of the decision and the findings made pursuant to Section 51292" (Section 51291[c]). ~~is required to make findings pursuant to California Government Code Section 51292 to support the cancellation of the Williamson Act contract for the property.~~ As stated in Government Code Section 51292, it is the policy of the state that public agencies cannot locate public improvements in agricultural preserves unless specific findings can be made:

1. The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve. (Section 51292[a])
2. If the land is agricultural land covered under a [Williamson Act] contract ~~pursuant to this chapter~~ for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement (Section 51292[b])

~~It is anticipated that State Parks could~~ The project facts support the first finding (pursuant to Section 51292[a]) because the selection of the Nicolaus property was based on the location ~~near~~ at the confluence of the Sacramento River, Big Chico Creek, and Mud Creek; the location relative to BSRSP; the potential the site offers to rehabilitate natural river processes, aid recovery of special-status species, restore riparian habitat, and improve water quality; and a willing seller. The property represents the potential expansion of BSRSP, including expansion of native riparian habitat in the Park (and within the greater area of protected and restored habitat along the Sacramento River between river mile [RM] 199 and RM 193) and the expansion and improvement of recreational facilities.

~~It is also anticipated that State Parks could~~ Project facts also support the second (pursuant to Section 51292[b]) ~~required~~ findings. As the purpose of the ~~land transfer~~ project, including the land transfer from TNC to State Parks, is both restoration of native riparian habitat and expansion of the BSRSP, the property needs to be adjacent to existing BSRSP property and offer an opportunity to restore riparian habitat. The Nicolaus property is located directly across River Road from the Indian Fishery Subunit and north of the ~~Singh Unit~~ Big Chico Creek Riparian Area Subunit (which includes the Singh Unit), separated by a privately owned orchard and field crops. These two subunits, totaling 240.6 acres, represent 89% of the total land that composes the BSRSP. New recreation facilities, such as trails and campground, would connect to and support the use of other existing facilities in BSRSP. Additionally, the existing farm complex would provide the ability to relocate the BSRSP headquarters to higher, less frequently flooded ground. The location ~~of the project near~~ at the confluence of the Sacramento River, Big Chico Creek, and Mud Creek provides a unique habitat restoration opportunity. Additionally, the property is located adjacent to lands that are part of DFG's the Sacramento River Wildlife Area, managed by DFG, and is located proximate to USFWS lands that are managed by the USFWS as part of the Sacramento River National Wildlife Refuge. ~~This~~ The Nicolaus property, similar to these neighboring public lands, is also located within the Sacramento River Conservation Area (SRCA), and could The proposed project would support the SRCA goal to "preserve remaining riparian habitat and reestablish a continuous riparian ecosystem along the Sacramento River between Redding and Chico and reestablish riparian vegetation along the river from Chico to Verona." Furthermore, the Nicolaus property, which is owned by TNC, has an owner willing to transfer the land to State Parks as a gift (i.e., State Parks would not purchase the Nicolaus property from TNC). Due to the large amount of land in public ownership in the vicinity of BSRSP, and the lack of private land owners willing to sell land adjacent to BSRSP, another location was not identified that could meet these criteria.

Notice of Nonrenewal of the Williamson Act Contract

Pursuant to Rule 6(A) of the Butte County Williamson Act Procedures (Butte County 2007b), either TNC (prior to the land transfer) or State Parks (following the land transfer) would serve written notice of nonrenewal of the Williamson Act contract for the Nicolaus property to DOC and Butte County, which would release State Parks from the contract after the ninth year following the year the notice of nonrenewal is submitted. During the nonrenewal period, State Parks would conduct activities consistent with the Williamson Act contract. ~~the dearth of State Park facilities in the Central Valley.~~

Once State Parks makes the findings pursuant to Section 51292, the Williamson Act contract would be cancelled and a new Williamson Act contract would not be required (pursuant to California Government Code Section 51295). County

As of 2005 (the most recent data available), a total of 215,248 acres were enrolled in the Williamson Act Program in Butte County (DOC 2006). The ~~cancellation~~ nonrenewal of the Williamson Act contract for the Nicolaus property (approximately 146 acres) would represent a 0.07% decrease in the total acreage under Williamson Act contract in Butte County. Based on the information presented above, State Parks concludes that the proposed project would result in a *less-than-significant impact on agricultural resources* within the intended meaning of CEQA and the CEQA Guidelines.

Land Use Compatibility with Agriculture and Williamson Act Contracts

The proposed habitat restoration and outdoor recreational uses at the project site would be compatible with surrounding agriculture land uses, based on existing federal and state laws and programs for farmland protection. As described in Impact 4.2-a, the Federal FPPA indicates that non-agricultural uses are urban uses, which detract from agricultural land values in the rating system, while “non-urban uses,” which create or protect agricultural land values, include non-paved parks and recreational areas. Based on the characteristics of the proposed habitat restoration and outdoor recreation facilities, the project would qualify as non-urban uses, which the FPPA considers to be protective of and compatible with agricultural values. The Williamson Act also contains numerous provisions that recognize the compatibility between agricultural and recreation/open space uses. The definitions included in the statute are the first indication of such compatibility. It defines an “agricultural preserve” as an area devoted to either agricultural use, recreational use, open space use, or any combination thereof (California Government Code Section 51201(d)). Also, “recreational use” is defined as the use of the land in its agricultural or natural state by the public, with or without charge, for a range of listed uses, including, but not limited to walking, hiking, picnicking, camping, swimming, boating, fishing, and other outdoor sports (California Government Code Section 51201(n)). Finally, “compatible use” is defined as any use determined to be compatible with the agricultural, recreational, or open space use of the land within the preserve (California Government Code Section 51201(e)). The habitat restoration and recreational facilities proposed are considered compatible with agriculture and therefore should have no significant adverse effects on neighboring farmland production. Furthermore, per the goals and guidelines under Park Plan Overall Goal AO-4, State Parks has incorporated design features (e.g., grassland buffers) into the habitat restoration and recreation facility plans to minimize land use incompatibilities and has/will coordinate with public and private landowners in the project vicinity to minimize land use conflicts. Park Plan guidelines also address fire protection and law enforcement at the Park (see Chapter 3, “Description of the Proposed Project”) to minimize incompatibilities with active agricultural operations on adjacent properties.

The definitions described above are reinforced in Section 51205 of the Williamson Act, which states that land devoted to recreational use...may be included within an agricultural preserve (California Government Code Section 51205). In outlining the purpose of the Williamson Act, the statute states that the discouragement of premature and unnecessary conversion of agricultural land to urban uses is a matter of public interest (California Government Code Section 51220(c)); there is no reference to other non-urban uses, such as low-intensity rural outdoor recreation, such as those that result from the proposed project. The clearest evidence for compatibility between agriculture and the habitat restoration and recreational facilities proposed at the project site are found in the principles of compatibility presented in Section 51238.1 of the statute. It states that uses approved on contracted lands, such as those proposed for the project site, will not significantly compromise the long-term agricultural capability of the subject contracted parcel in agricultural preserves (California Government Code Section 51238.1(a)(1)). The proposed project, and goals and guidelines of the Park Plan, strive to maintain physical conditions of the land that create resource values, including future agricultural and open space capabilities. Therefore, the habitat restoration and recreational facilities proposed are considered compatible with surrounding agriculture land use this impact is considered *less than significant*.

SOCIOECONOMIC CONSIDERATIONS

The CEQA Guidelines provide that “economic or social information *may* be included in an EIR or *may* be presented in whatever form the agency desires” but that “economic or social effects of a project *shall not* be treated as significant effects on the environment.” (CEQA Guidelines Section 15131. Emphasis added).

Therefore, while social and economic consequences are not in of themselves environmental impacts under CEQA, this section discusses socioeconomic considerations related to agricultural production resulting from implementation of the proposed project.

Agricultural production supports considerable economic activity in Butte County. The value of all agricultural production in Butte County was approximately \$454 million in 2006 (Butte County 2007a). Almonds and walnuts accounted for approximately \$104.5 million and \$76.7 million of total production, respectively. In 2006, the amount of land in agricultural production in Butte County was 464,308 acres, of which almonds and walnuts accounted for 74,942 acres.

Combined, the Singh Unit and Nicolaus property represent a total of 189 acres of designated Irrigated Farmland (see Section 4.2.1). Of this amount, a total of 170 acres are currently planted in walnuts and almonds. If this total acreage was removed from production for native vegetation restoration or rural outdoor recreation uses, it would constitute a very small portion of total agricultural lands in walnut and almond production in Butte County (approximately 0.2% of Butte County's almond and walnut orchards and approximately 0.04% of land in agricultural production), and a correspondingly small amount of production value (approximately \$209,000 annually). Reducing agricultural production value by this proportion would have a minor, if not unnoticeable, economic effect in the county. The cessation of agricultural production can also cause an indirect economic ripple effect on secondary service and supply businesses supporting agriculture. However, because of the small relative contribution of the project site to agricultural production in the county, the combined direct and indirect economic effect of removing agricultural production from these lands would be minor.

4.2.4 MITIGATION MEASURES

No mitigation is required for impacts to agricultural resources.

4.3 HYDROLOGY, WATER QUALITY, AND RIVER GEOMORPHOLOGY

This section addresses hydrology, water quality, and river geomorphology in the project area and the potential effects of the proposed project. As described in Chapter 3, “Description of the Proposed Project,” the project area occurs along the Sacramento River in and adjacent to Bidwell-Sacramento River Park (BSRSP). Potential effects on aquatic species are addressed in Section 4.4, “Biological Resources.”

This analysis tiers off of the BSRSP General Plan and Draft Environmental Impact Report (Park Plan) which considered the potential impacts to hydrology and water quality resulting from implementation of the Park Plan (Park Plan Section 4.6.8). As described in Chapter 1 of this EIR, the proposed project actions are consistent with those identified in the Park Plan.

4.3.1 ENVIRONMENTAL SETTING

SOURCES OF INFORMATION

The evaluation of hydrology, water quality, and river geomorphology for this DEIR is based largely on review of the following documents:

- ▶ *Hydraulic Analysis for Flood Neutrality on the Nicolaus and Singh Properties, Sacramento River, Mud Creek, and Big Chico Creek.* ~~Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties; Sacramento River, RM 194-195.~~ Prepared by Ayres Associates, ~~in December~~ May 30, 2008.
- ▶ *Sacramento and San Joaquin River Basins California Comprehensive Study.* Interim report. Prepared by U.S. Army Corps of Engineers (USACE) and The Reclamation Board in 2002.
- ▶ *Sacramento River Conservation Area (SRCA) Forum Handbook*, prepared in 2003. (<http://www.sacramentoriver.ca.gov/publications/handbook/handbook.html>)
- ▶ California Department of Parks and Recreation. 2003 (December). *Bidwell-Sacramento River Park General Plan and Draft Environmental Impact Report*. Prepared by EDAW, Sacramento, CA.

These resources are cited throughout this section and corresponding references are included in Chapter 9, “References.” Relevant sections of the CALFED Final PEIS/EIR were reviewed, including Section 5.1, “Water Supply and Water Management;” Section 5.2, “Bay-Delta Hydrodynamics and Riverine Hydraulics;” and Section 5.3, “Water Quality.”

REGIONAL CONTEXT

The Sacramento River Valley encompasses an area of more than 26,300 square miles in the northern portion of the Central Valley. The Sacramento River basin encompasses large and smaller sub-basins. Major sub-basins include the McCloud River, Pit River, Goose Lake and the Cascade Range in the north. Major sub-basins of the Sierra Nevada include the Feather River and the American River in the east. Smaller sub-basins include the Coast Range and Klamath Mountains in the west, and the Bay-Delta in the south. The Sacramento River joins the San Joaquin River in the Bay-Delta near Pittsburg in Contra Costa County. The combined waters from these two river systems flow into Suisun Bay, through the Carquinez Strait, into San Pablo Bay and San Francisco Bay, and to the Pacific Ocean.

The Sacramento River is the largest river in the state. It has an average annual runoff of 22.4 million acre-feet (MAF) and yields 35% of the state’s developed water supply. Upper Sacramento River flows are largely controlled by the Central Valley Project (CVP) storage and diversion facilities operated by the U.S. Bureau of Reclamation and local irrigation districts. Shasta Dam, located upstream of Redding, is the dominant reservoir on

the mainstem Sacramento River, and its operations exert considerable influence over stream flow patterns in the river (described below).

In its historic condition, the Sacramento Valley was composed of extensive perennial grasslands, riparian woodlands, and marshes. The Sacramento River and other primary waterways often would flood in winter and early spring, recharging wetlands and depositing fertile sediments on the floodplain that is now valued for agriculture. The Sacramento River within the project area is characterized by a meandering channel with a broad alluvial floodplain. Upstream reaches are characterized by confined canyons, and lower reaches are characterized by natural levees separating the river from extensive flood basins.

The natural physical and biological processes of erosion, deposition, and riparian succession along the Sacramento River have generally been modified by humans throughout the period of recent development since about 1850. Construction of Shasta Dam (completed in 1944) 9 miles north of Redding resulted in a substantial reduction in winter flood flows and an increase in summer stream flows. Past efforts to reclaim floodplain areas for agricultural production and flood protection involved clearing of riparian areas, stabilization of stream banks, and construction of levees and other flood protection structures.

PROJECT AREA SETTING

Hydrology

Stream flow patterns in the Sacramento River reflect a combination of natural runoff events and operational controls (DWR 1994). Annual average precipitation in the entire basin is 36 inches and varies considerably from approximately 20 inches in the valley floor falling nearly exclusively as rain, and ranging from 40 to 60 inches annually as rain and snow at higher elevations in the mountains (CALFED 2000). In general, natural Sacramento River stream flow patterns are distinctly seasonal; however, managed reservoir releases have altered the natural flows as depicted in Table 4.3-1. The typical water year (starting October 1) begins with low natural runoff flows, reduced reservoir releases as the agricultural irrigation season ends, and minimum reservoir storage levels (CALFED 2000). With the return of winter rains, the highest flows and increased probability of overbank flooding events occurs during the winter rainfall months of January and February. Flows decrease slightly in late winter before peak periods of mountain snowmelt that occur in spring. Flows are muted in spring compared to historical unimpaired flows as the natural runoff is retained to fill the reservoirs to their normal summer operating pool levels. Flows then increase through the summer as reservoirs are lowered (primarily Shasta Lake) for hydropower production and to meet the agricultural demands of the Sacramento Valley and CVP operational demands and requirements.

**Table 4.3-1
Average Mean, Maximum, and Minimum Monthly Flows (cfs) on the Sacramento River**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Sacramento River at Hamilton City												
Mean	5,624	5,683	15,695	18,395	19,590	14,263	8,325	11,303	10,961	11,777	8,299	6,909
Maximum	6,736	6,450	20,661	29,779	41,324	23,698	13,320	22,575	12,857	12,182	8,984	7,790
Minimum	4,550	4,888	6,462	7,881	8,697	8,885	5,437	7,099	9,087	10,838	7,701	5,831
Sacramento River at Ord Ferry												
Mean	5,832	5,797	18,382	21,252	20,659	16,589	9,728	12,357	11,243	11,819	8,961	7,559
Maximum	6,889	7,023	22,345	34,487	42,752	27,485	14,336	24,200	13,411	12,632	9,563	8,349
Minimum	5,221	4,777	11,996	8,608	10,471	10,361	5,816	7,855	9,349	10,737	8,200	6,269
Source: DWR 2005												

Table 4.3-1 shows descriptive statistical flow parameters (i.e., minimum, average, and maximum) for two gauging stations that are located in the project area (Hamilton City and Ord Ferry). These measured stream flows are considered representative of the range of flow conditions in the project area.

Sacramento River Flows and Flood Control Operations

This subsection provides an overview of the flow patterns on the Sacramento River and flood control structures and operations to protect communities, agriculture, and other commercial operations.

The Sacramento River has a design flow capacity of 160,000 cubic feet per second (cfs) just downstream of the project area (USACE and The Reclamation Board 2002). Table 4.3-1 depicts average monthly flows on the Sacramento River at the Hamilton City and Ord Ferry gauging stations from 2001 through 2004.

Shasta Dam provides flood protection to the communities of Redding, Anderson, Red Bluff, and Tehama, as well as the agricultural lands, industrial developments, and communities downstream along the Sacramento River. Private levees or low berms, and USACE project levees limit the area of flooding in both urban and agricultural areas. Nevertheless, small communities and portions of larger communities continue to be at risk of flooding along portions of the river and tributaries. Shasta Dam is operated for an objective release of 79,000 cfs at Redding and 100,000 cfs at Bend Bridge in Red Bluff. Flows greater than 36,000 cfs begin to cause flooding in Redding (USACE and The Reclamation Board 2002).

Tributaries entering the Sacramento River from the west, including Clear, Cottonwood, Elder, Thomes, and Stony creeks, drain runoff from the Coastal Mountain range. Cottonwood Creek provides the most significant amount of inflow to the Sacramento River in this region. Tributaries from the east that drain runoff from the Cascade and Sierra Nevada mountain ranges include the Cow, Bear, Battle, Paynes, Antelope, Mill, Deer, Rock, Big Chico, Mud, and Butte creeks. Most of the tributaries are unregulated and can contribute high flood flows to the Sacramento River (USACE and The Reclamation Board 2002).

The maximum historical flows from Keswick Dam to Red Bluff are predominantly a result of uncontrolled local drainage. The 2,500-square mile uncontrolled drainage area between Keswick Dam and Bend Bridge can produce flows well in excess of the design channel capacity of 100,000 cfs. These high-magnitude flows can occur very rapidly, requiring release changes from Keswick Dam based on official flow forecasts and complicated by the 8- to 12-hour travel time between Keswick Dam and Bend Bridge (USACE and The Reclamation Board 2002). As described above, the measured flows at Red Bluff and Colusa reflect the range of conditions in the project area.

The Sacramento River Flood Control Project

The Sacramento River Flood Control Project (SRFCP) was conceived in 1911 and constructed by USACE downstream of the project area. At that time, 80% of the proposed 500 miles of river and bypass levees had already been completed under private and municipal levee systems begun in the 1850s (Kelley 1989). Along the Sacramento River, the SRFCP consists of setback levees beginning near the town of Ord on the west side and just north of the Butte/Glenn County line on the east. The west bank project levee runs upstream to approximately river mile (RM) 184. The east bank project levee extends only as far upstream as RM 176. (The proposed project site is located at RM 194–195.) The Reclamation Board, which as of January 1, 2008 is called the Central Valley Flood Protection Board (CVFPB), is responsible for maintenance of the SRFCP. The responsibility is passed on to the local reclamation and levee districts or to the Department of Water Resources (DWR) where no such district exists. The bank protection project consists of the rock revetment of about 160 miles of banks and levees, installed to ensure the security of the flood control system (SRCA Forum 2003). Additional levees maintained by the CVFPB in conjunction with local reclamation districts extend upstream of the USACE project levees.

The Chico Landing to Red Bluff Project, authorized in 1958, extends and modifies the SRFCP. This project, sponsored by CVFPB, provides for bank protection (erosion protection) and incidental channel modifications

along 50 miles of the Sacramento River between Chico Landing and Red Bluff. In this reach, which includes the project area, 21.5 miles of bank protection have been installed to hold the river in place and limit meandering of the channel (USACE and The Reclamation Board 2002). Specifically at the Singh Unit and Nicolaus property, bank protection has been applied to eroding banks or repaired in a number of locations in the project area under USACE PL 84-99 emergency authority (Luster, pers. comm., 2005).

Behind the present day SRFCP levees, access to the Sacramento River floodplains and flood basins is limited by the overflow weirs (Moulton, Colusa, Tisdale, Fremont, and Sacramento) and bypasses (Sutter, Yolo, and Butte Basin), described below.

Butte Basin Overflow Area

The Butte Basin lies to the east of the Sacramento River and extends from the Butte Slough outfall gates near Meridian (RM 138) to the near the mouth of Big Chico Creek at the Singh property (RM 194) (see Exhibits 3-2 through 3-4). The Butte Basin Overflow Area is an essential element of the flood management system for the Sacramento River. Flood flows are diverted out of the Sacramento River into the Butte Basin and Sutter Bypass via several designated overflow areas (i.e., low points along the east side of the river) that allow high flood flows to exit from the Sacramento River channel. Overflow into the Butte Basin reduces the peak discharge and stage between the main levees of the SRFCP. The reduction of discharge and stage in the river is necessary to prevent the overtopping and subsequent failure of the flood control project levees downstream. The Sutter Bypass, in turn, conveys flows to the lower Sacramento River region at the Fremont Weir near the confluence with the Feather River and into the Sacramento River and the Yolo Bypass (USACE and The Reclamation Board 2002). The Yolo Bypass (59,000 acres), Sutter Bypass (15,000 acres) and Butte Basin provide access to broad, inundated floodplain habitat during wet years.

At high stages, water flows from the Sacramento River into the Butte Basin near the mouth of Big Chico Creek. Farther downstream of the project area, additional flood flows are diverted out of the Sacramento River into the Butte Basin and Sutter Bypass via the M&T Bend Flood Relief Structure, 3B's Flood Relief Structure, Goose Lake Flood Relief Structure, and the Moulton, Colusa, and Tisdale Weirs.

Sacramento River Bank Protection Project

The Sacramento River Bank Protection Project (SRBPP) was originally authorized under the Flood Control Act of 1960 (PL 86-645). Its purpose is to protect the levees and flood control facilities on the Sacramento River from the Bay-Delta at Collinsville at RM 0 to Chico Landing at RM 194 and includes the lower reaches of the American River (RM 0 to RM 23), Feather River (RM 0 to RM 61), Yuba River (RM 0 to RM 11), and Bear River (RM 0 to RM 17), as well as portions of Three Mile, Steamboat, Sutter, Miner, Georgianna, Elk, and Cache Sloughs. The SRBPP was created in 1959 and initiated by USACE in 1963 as a means of protecting the SRFCP levees. The SRBPP is an ongoing project subject to Congressional reauthorization. Construction activities authorized to date by the SRBPP account for approximately 152 miles of river bank revetment.

1961 USACE Mud, Big Chico and Sandy Gulch Channel Improvement and Levee Construction Plan

The 1961 U.S. Army Corps of Engineers (USACE) Mud, Big Chico and Sandy Gulch Channel Improvement and Levee Construction Plan called for the following: (a) diversion structures near the head of Sandy Gulch (Lindo Channel) and on Chico Creek to divert excess Chico Creek flood flows to Mud Creek; (b) a diversion channel to Mud Creek via Sycamore Creek and related left bank levee; (c) levees along both banks of Mud Creek and tributaries and channel enlargement as required; (d) bank protection on both banks of Mud and Sycamore Creeks where needed to prevent erosion due to high stream velocities; and (e) drainage structures as required through the new levees. The USACE plan addressed levee construction and channel widening for the Sacramento River tributaries, but did not contain any guidelines for land use on the dry sides of the levee (such as requiring that fields must be in agriculture). According to the Plan, landowner opposition to the plan resulted in USACE not building a levee on the west side of Mud Creek between Sacramento Avenue and the Sacramento River. Opposed landowners were primarily those owning land on the west side of Mud Creek between Sacramento Avenue and

the Sacramento River. Therefore, there is no “design project” on the Nicolaus property or Singh Unit. The 1961 USACE report (Page 5, Section 11a) states:

“...Therefore, in view of the opposition of the local interests and in accordance with the request of the Reclamation Board, channel improvement and right bank levee construction in the above reach has been excluded from the plan of improvement.”

The constructed flood control system pursuant to this Plan does not include a levee on the west side of Mud Creek in the vicinity of the project site. Additionally, the historic east-west slough on the Singh Unit was filled with spoil material from the channel widening portion of the USACE project as illustrated in Exhibit 8-1 of this EIR.

Water Quality

Surface Water Quality

Designated beneficial uses for the Sacramento River and all tributaries from Shasta Dam, upstream of the project area, to the Colusa Basin Drain, downstream of the project area, include:

- ▶ municipal, industrial, and agricultural supply;
- ▶ power generation;
- ▶ contact and non-contact recreation;
- ▶ cold-water fish habitat, migration, and spawning;
- ▶ warm-water fish habitat, migration, and spawning;
- ▶ wildlife habitat; and
- ▶ navigation.

The U.S. Geological Survey (USGS) completed an evaluation of water quality conditions of the Sacramento River upstream of the project area at Red Bluff as a component of an overall analysis of conditions in the Sacramento River watershed (USGS 2000). The evaluation indicated that the Sacramento River at Red Bluff generally has excellent water quality that is very low in contaminants.

Table 4.3-2 shows a summary of average concentrations from monthly water samples for conventional physical and inorganic chemical constituents measured in the Sacramento River at Red Bluff from February 1996 through April 1998 (USGS 2000). Red Bluff is approximately 55 miles north (upstream) of the project area and while changes in water quality are likely to occur as water flows downstream, this is the best available information to characterize water quality at the project area. In general, the data indicate that the river is low in total dissolved solids (TDS) as indicated by measurements of electrical conductivity (EC), total hardness, and specific cations and anions. The water has neutral pH, moderate alkalinity, and adequate dissolved oxygen (DO) levels for aquatic organisms. The water from the river is also generally low in nutrients (e.g., nitrogen and phosphorus) that can cause nuisance algae and aquatic vascular plant growth. Trace metal content is low in the river. Although mercury is routinely detected, the concentration has not exceeded ambient California Toxics Rule criteria (see below for description). Pesticides have been detected in the Sacramento River; however, with the exception of the drinking water standard for carbofuran, there are no applicable regulatory criteria established for the pesticides that have been detected. DFG has established guidance values for aquatic life chronic criteria (i.e., four-day-average) applicable to the organophosphate pesticides diazinon and chlorpyrifos. The DFG guidance values and other reference dose values for aquatic life or human health hazards that have been established for many pesticides are generally indicative of the lowest concentrations at which toxic effects have been detected. The average concentration of diazinon in the Sacramento River does not exceed the DFG guidance level of 50 nanograms per liter (ng/L) (DFG 2000).

Table 4.3-2		
Summary of Conventional Water Quality Constituents in the Sacramento River at Red Bluff, 1996–1998		
Constituent (Units)	Water Quality Objective	Average Measurement
Conventional Physical and Chemical Constituents		
Temperature	<2.5°F ^a	11.5°C
EC (µS/cm)	—	116
DO (mg/L)	7.0 ^b	10.7
DO Saturation (%)	85 ^b	99
pH (standard units)	6.5 to 8.5 ^c	7.8
Alkalinity (mg/L CaCO ₃)	—	48.3
Total Hardness (mg/L CaCO ₃)	—	46.6
Suspended Sediment (mg/L)	—	38.8
Calcium (mg/L)	narrative ^d	10.3
Magnesium (mg/L)	—	5.0
Sodium (mg/L)	—	5.8
Potassium (mg/L)	—	1.1
Chloride (mg/L)	500 ^e	2.4
Sulfate (mg/L)	500 ^e	4.5
Silica (mg/L)	—	20.5
NO ₂ +NO ₃ (mg/L N)	NO ₃ <10 ^f	0.12
Total Phosphorus (mg/L P)	—	0.0477
Trace Metals		
Arsenic (µg/L)	50 ^g	1.0
Chromium (µg/L)	180 ^g	1.0
Copper (µg/L)	5.1 ^g	1.6
Mercury (µg/L)	0.050 ^h	0.0045
Nickel (µg/L)	52 ^g	1.2
Zinc (µg/L)	120 ^g	2.3
Organic Pesticides		
Molinate (ng/L)	13,000 ⁱ	<60
Simazine (ng/L)	3,400 ^j	<22
Carbofuran (ng/L)	40,000 ^e , 500 ⁱ	<31
Diazinon (ng/L)	51 ^k	<28
Carbaryl (ng/L)	700 ^j	<41
Thiobencarb (ng/L)	1,000 ^a	<38
Chlorpyrifos (ng/L)	14 ^k	<25
Methodathion (ng/L)	—	<38
Notes:	CaCO ₃ = calcium carbonate	µS/cm = microsiemens per centimeter
	mg/L = milligrams per liter	ng/L = nanograms per liter
	µg/L = micrograms per liter	NO ₂ = nitrogen dioxide (nitrate)
	MRL = method reporting limit	NO ₃ = nitrogen trioxide (nitrite)
^a	Regional Water Board (formerly called the Regional Water Quality Control Board) Basin Plan (Basin Plan) water quality objective for allowable change from controllable factors	
^b	Basin Plan water quality objective	
^c	Basin Plan water quality objective; <0.5 allowable change from controllable factors	
^d	Basin Plan narrative objective: water shall not contain constituent in concentrations that would cause nuisance or adversely affect beneficial uses	
^e	Secondary drinking water maximum contaminant level (MCL)	
^f	Primary drinking water maximum contaminant level (MCL)	
^g	California Toxics Rule aquatic life criteria for four-day average dissolved concentration	
^h	California Toxics Rule human health maximum criteria total recoverable concentration	
ⁱ	DFG hazard assessment value	
^j	U.S. Environmental Protection Agency Integrated Risk Information System reference dose for drinking water quality	
^k	DFG aquatic life guidance value for four-day average concentration	
Source: Constituent measurements from USGS 2000.		

The Sacramento River was also evaluated from 1997 through 2003 as part of DWR's Sacramento River Watershed Program (SRWP) and during varying periods for programs coordinating with the SRWP (Larry Walker Associates 2004). Results indicated that some samples collected from throughout the Sacramento River watershed in 2002–2003 caused toxicity to test organisms; the causes of observed toxicity at these locations has not yet been determined. As a result of these data, the Sacramento River is included on the federal Clean Water Act (CWA) Section 303(d) list of impaired waters for unknown toxicity. The Central Valley Regional Board (formerly called Central Valley Regional Water Quality Control Board) is required to develop a total maximum daily load (TMDL) for the specific pollutants in waterways on the 303(d) list. The Central Valley Regional Board has listed the TMDL for “unknown toxicity” as a low priority (Central Valley Regional Board 2002).

Geomorphology

The geomorphology of the Sacramento River varies throughout the region. From the base of Mount Shasta for about 75 miles downstream to near elevation 300 near the town of Red Bluff, the river is generally constrained from moving laterally by erosion-resistant volcanic and sedimentary formations. The river in this area, the Sacramento Canyon, is generally narrow and deep, and the floodplain is similarly narrow. From here, the river emerges onto the broad alluvial floodplain of the Sacramento Valley. For the next 100 river miles or so, the Sacramento River historically meandered freely across a wide (1.5 to 4 miles) floodplain (SRCA Forum 2003). By eroding and depositing sediment, the river migrated across deep alluvial soils from the Red Bluff area to the area near Colusa (USACE and The Reclamation Board 2002).

The reach of the Sacramento River that includes the project area is predominately a meandering single-thread channel bordered by setback levees. This reach of the river has become less sinuous since 1896. This has been attributed to chute cutoffs promoted by the clearing of riparian forests and to natural variation over time (USGS 1977, SRCA Forum 2003). Meander scars of unknown age located in the 100-year meander belt indicate a high degree of sinuosity in at least portions of the channel in the relatively recent past (SRCA Forum 2003).¹

While riparian forest vegetation is generally believed to protect riverbanks from erosion, few studies have quantified the effect of riparian vegetation versus other cover types on rates of river channel migration. Recently, Micheli et al. (2004) compared migration rates and bank erodibilities between 1949 and 1997 for reaches of the Sacramento River between Red Bluff and Colusa. The study compared reaches bordered by riparian forest versus agriculture and showed that agricultural floodplains are 80–150% more erodible than riparian forest floodplains. Larsen et al. (2002a) simulated river migration at river miles 185 to 201 using a channel migration model that is based on mathematical–physical algorithms for flow and sediment transport. The model is based on physical processes to accommodate changes in input variables and thus predicts the consequences of conditions—such as flow regime changes or bank stabilization measures—that have not existed in the past. Modeling results predict the Sacramento River channel migrating towards the Nicolaus property (RM 195) and away from the Singh property (RM 194) between 1997 and 2072. These studies show that advances in the understanding of long term river meander processes in the Sacramento River are underway (Micheli et al. 2004 and Larsen et al. 2002); however, there is still a great deal of uncertainty in the prediction and modeling of the rate, extent, and specific configuration of complex, long-term meander processes.

The USACE has been stabilizing the channel in the vicinity of the Butte Basin Flood Relief Structures with a series of bank protection installations as part of its flood control responsibilities. Because changes in channel alignment in this area (particularly chute cut-offs of meander loops) could potentially lower channel elevation, it was thought that this would result in less flow into Butte Sink via the flood relief structures, and more flow down the leveed river corridor. Recent studies indicate however, that change in channel elevation is insignificant in altering the flow split between Butte Basin and the main channel of the Sacramento River at higher flows.

¹ The *100-year meander belt* is the combination of all channel locations between 1896 and 1991. It is the area along the river that has experienced channel movement in the relative immediate past. Refer to Section 3.1.3 of the “Description of the Proposed Project,” for further discussion of this topic.

These studies show that excessive flows would enter the leveed reach regardless of channel alignment (Ayres 1997).

Downstream of the project area, SRFCP levees were constructed along the Sacramento River and its tributaries to prevent the flooding of nearby communities. The levees were designed to confine flows to a relatively narrow channel that would efficiently convey sediment through the system, thereby reducing the dredging necessary to maintain navigation. Today, the Sacramento River downstream of the project area is a leveed and largely straightened channel. The river does not meander as it did historically, but generally conveys flows downstream and into overflow bypass channels, as needed. The banks are routinely managed, but they are prone to erosive forces, especially on outside curves.

Geology and Soils

The project area is in the Sacramento Valley, which constitutes the northernmost third of the Great Valley physiographic province of California—a large, northwest-trending structural trough filled with a tremendously thick layer of sediment ranging in age from Jurassic to Holocene (Bailey 1966). The SRNWR properties exist on and incorporate several types of level, nearly level, and gently sloping alluvial landforms; including floodplains, natural levees, paleochannels, and sloughs, that are composed of sediments deposited by the Sacramento River system (Jennings and Strand 1960, Saucedo and Wagner 1992, Strand 1962). More recent deposits lie on top of older formations and include terrace deposits (including the Modesto Formation), paleochannel deposits, alluvial fans, meander belt deposits, basin, and marsh deposits (SRCA Forum 2003). The terrace deposits of the Modesto Formation flank the river in stair steps away from channel. These deposits tend to erode at a lower rate than the other younger deposits and tend to form higher, more consolidated banks along the river, referred to as geologic control (SRCA Forum 2003). In general, the sediments that comprise the surficial portions of these landforms are of Holocene age and consist of gravel, sand, silt, and minor amounts of clay.

Overlying Holocene alluvial deposits are the relatively young and predominantly coarse- and moderately coarse-textured soils of the Columbia, Gianella, Horst, and Laugenour series (Gowans 1967, Begg 1968, TNC 2001). Soils of the Columbia, Gianella, and Horst series occupy the majority of land area in the project area. These soils typically consist of very deep, well drained sands, loamy sands, sandy loams, loams, and silt loams formed from mixed alluvium. Surface runoff in the project area is slow and the hazard of erosion is slight.

The setback levees of the SRFCP are generally built along the Modesto Formation, along the west side of the river. On the east side, however, the levees lie well within the paleochannel deposits.

4.3.2 REGULATORY SETTING

This section includes applicable laws and regulations for flood safety and water quality that are identified as part of the due diligence process and that could apply to any type of project located in the project area. Those laws and regulations applicable to this proposed project are addressed in the environmental impact section, below.

FLOOD SAFETY

The primary facilities for controlling flood damages in the Sacramento River system are reservoirs providing flood storage and levees along channels. Also important in preventing flood damages are coordinated preparations for flood fighting and emergency planning, including evacuation. Several federal, state, and local agencies have responsibilities for different aspects of operations and maintenance of flood control facilities and for emergency response. The roles of these entities are summarized below.

The flood control facilities on the Sacramento River are part of the joint federal/state SRFCP. The USACE, in conjunction with the State, developed a flood control plan for the Sacramento River as part of the SRFCP, which included levee construction, channel improvements, and reservoir flood storage. It should be noted that SRFCP

flood control projects begin down-river from the Singh Unit and Nicolaus property (located at RM 194–195). The levees along the Sacramento River in the vicinity of the project area are private levees and not within the SRFCP. Public levees extend along Mud Creek though they are not a part of the SRFCP.

The Sacramento River levees were constructed by USACE as part of the SRFCP. These project levees are within an easement obtained by the State through the Sacramento-San Joaquin Drainage District. USACE participates in the flood operation of the river and levee system through the development of flood release schedules. Additionally, construction and repair of the existing levees along the Sacramento River has been undertaken by USACE over the years as part of its ongoing efforts to improve the regional protections provided by the SRFCP. Project levees in California must meet the standards for design and construction specified by the USACE as discussed in Engineering Manual 1110-2-1913 (USACE 2000).

The CVFPB enforces appropriate standards for the maintenance and protection of flood control facilities in the Central Valley (per Water Code Sec. 8520 et. seq.). A Memorandum of Agreement (MOA) dated November 3, 1999, between Butte County and the State Reclamation Board (now CVFPB) delegated regulatory authority for flood control in the proposed project area to Butte County. The MOA states that Butte County cannot delegate its regulatory responsibility to the Sacramento River Reclamation District without the approval of the CVFPB. Additionally, when Butte County learns of a proposed action that it may be without jurisdiction to regulate, the County will notify the CVFPB. In that event, CVFPB may exercise its jurisdiction under Water Code 8710 to require an application for an encroachment permit (See Appendix A, “Responses to Scoping Comments,” for further information).

The CVFPB must approve any activity that may affect *project works*, to ensure that the activity maintains the integrity and safety of flood control project levees and floodways and is consistent with the flood control plans adopted by the CVFPB and the State legislature (Water Code Sections 8533 and 8534). Project works are the components of a flood control project in the CVFPB’s jurisdiction that the board or the legislature has approved or adopted. Project works include levees, bank protection projects, weirs, pumping plants, floodways, and any other related flood control works or rights-of-way that have been constructed using state or federal funds. Project works also include flood control plans. Rules promulgated in Title 23 of the California Code of Regulations (CCR Title 23, Division 1, Article 8 [Sections 111 through 137]) regulate the modification and construction of levees to ensure public safety. The rules state that existing levees may not be excavated or left partially excavated during the flood season. The flood season for the Sacramento River is November 1 through April 15.

Levee operation and maintenance are overseen by DWR, which inspects the levees and issues a biannual report. The report covers the general condition of the levee, vegetation control, rodent control, and flood preparedness.

The National Weather Service (NWS), U.S. Bureau of Reclamation, and DWR jointly operate the California-Nevada River Forecast Center (CNRFC), which disseminates climatological information and river flow forecasts. Coordination between the CNRFC and entities operating major flood control reservoirs in the state ensures that the CNRFC has necessary information on current and proposed reservoir outflows to allow the NWS to forecast river stages. In addition, DWR and NWS jointly operate the State-Federal Flood Operations Center (Flood Operations Center), which gathers flood information and disseminates it to emergency operations personnel and the public. This agency also coordinates activities of the different flood control agencies and provides data necessary for the informed operation of the reservoirs.

The State Office of Emergency Services (OES) coordinates both state and federal resources in response to flood emergencies. The local offices of emergency services coordinate all local emergency operations. These could include evacuating the floodplain, obtaining state assistance with a flood fight, and implementing recovery actions following a flood. The local office of emergency services in the project area receives its information from the Flood Operations Center and, to some extent, directly from the dam operators.

During floods, the project levees must be continually patrolled so that the functioning of the levee system can be assessed and immediate emergency actions initiated if a defect is detected. Forecasts issued by the Flood Operations Center are the primary notification received by local levee districts for the need to patrol the levees. If levee defects are found that are beyond the capability of the responsible levee district to manage, it will request assistance from the State and USACE. Such requests are coordinated through the State OES system.

SACRAMENTO AND SAN JOAQUIN RIVER BASINS CALIFORNIA COMPREHENSIVE STUDY

The Sacramento and San Joaquin River Basins California Comprehensive Study (Comprehensive Study) was a joint effort by The Reclamation Board (now called CVFPB) and USACE, in coordination with federal, state, and local agencies, groups, and organizations in the Central Valley. The Comprehensive Study was not a regulatory program per se, but consistency with its goals and objectives is important for any project affecting flood control in the Sacramento and San Joaquin River basins. Responding to the flood events in the 1980s and 1990s, the State Legislature and Congress directed USACE to develop a comprehensive plan for flood damage reduction and environmental restoration purposes for the Sacramento and San Joaquin River basins. This effort was conducted in cooperation with The Reclamation Board (now called CVFPB).

In December 2002, an interim report was released by the Comprehensive Study team (USACE and The Reclamation Board 2002). The report identified the Comprehensive Study as an approach to developing projects in the future to reduce damages from flooding and restore the ecosystem in the Sacramento-San Joaquin River basins. As described in the report, the Comprehensive Study has three parts: (1) a set of principles to guide future projects, (2) an approach to develop projects with consideration for system wide effects, and (3) an organization to consistently apply the guiding principles in maintaining the flood management system and developing future projects.

The Comprehensive Study has proposed a set of guiding principles to govern implementation of projects that propose modifying the Sacramento or San Joaquin River flood control systems. These principles have been developed to ensure that projects proposed to be implemented are consistent with the objectives established by USACE and The Reclamation Board (now called CVFPB). The following are the Comprehensive Study's guiding principles:

- ▶ recognize that public safety is the primary purpose of the flood management system;
- ▶ promote effective floodplain management;
- ▶ promote agriculture and open space protection;
- ▶ avoid hydraulic and hydrologic impacts;
- ▶ plan system conveyance capacity that is compatible with all intended uses;
- ▶ provide for sediment continuity;
- ▶ use an ecosystem approach to restore and sustain the health, productivity, and diversity of the floodplain corridors;
- ▶ optimize use of existing facilities;
- ▶ integrate with the CALFED Program and other programs; and
- ▶ promote multi-purpose projects to improve flood management and ecosystem restoration.

The proposed project lies at the junction of the upper and middle Sacramento River regions of the Comprehensive Study.

WATER QUALITY

The quality of surface water and groundwater resources in the state is protected under various state and federal laws, including the state Porter-Cologne Water Quality Control Act and the CWA. The U.S. Environmental Protection Agency (EPA) has generally authorized the State Water Board (formerly called the State Water Resources Control Board) and the nine associated Regional Boards to administer all surface water and groundwater quality regulations in the state. Both the EPA and the State Water Board generally provide oversight, while the Regional Boards have primary responsibility for implementation and enforcement. The Central Valley Regional Water Board is responsible for enforcing these regulations in the project area.

Water Quality Control Plan and Applicable Water Quality Criteria

Pursuant to the Porter-Cologne Water Quality Control Act, the Regional Water Board prepares and updates a water-quality control plan (Basin Plan) every three years that identifies water quality protection policies and procedures. The Basin Plan describes the officially designated beneficial uses for specific surface water and groundwater resources and the enforceable water quality objectives necessary to protect those beneficial uses.

The Basin Plan includes numerical and narrative water quality objectives for physical and chemical water quality constituents. Constituents for which numerical objectives are set include temperature; DO; turbidity; pH (i.e., acidity); TDS; EC; bacterial content; and various specific ions, trace metals, and synthetic organic compounds. Narrative objectives are set for parameters such as suspended solids, biostimulatory substances (e.g., nitrogen and phosphorus) (i.e., nutrients), oils and grease, color, taste, odor, and aquatic toxicity. The primary mechanism that the Regional Water Board uses to ensure conformance with Basin Plan water quality objectives and implementation policies and procedures is to issue waste discharge requirements (WDRs) for projects that may discharge wastes to land or water. WDRs specify terms and conditions that must be followed during the implementation and operation of a project.

In addition, the California Toxics Rule is a separate regulatory instrument that prescribes aquatic life and human health protection criteria for trace metals and organic compounds. Federal and state drinking water quality standards regulate the quality of treated municipal drinking water supplies delivered to users.

Clean Water Act, Section 303(d)

The Regional Water Board administers Section 303(d) of the CWA, which requires each state to maintain a list of water bodies in which physical and/or chemical aspects of water quality are limited or impaired by the presence of pollutants. Section 303(d) requires preparation of a total maximum daily load (TMDL) program for waters identified as impaired. The TMDL is a quantitative assessment of the pollutant sources, contaminant loads, assimilative capacity of the water body for the specific contaminants, and allocation of specific load reduction targets that are necessary to ensure compliance with the water quality standards.

Clean Water Act, Section 401

Section 401(a)(1) of the CWA specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal licensing or permitting agency a certification that any such discharge will comply with the applicable provision of Sections 301, 302, 303, 306, and 307 of the CWA. The Regional Water Board administers the Section 401 program with the intent of prescribing measures for the applicant's project that are necessary to avoid, minimize, or mitigate adverse impacts on water quality and ecosystems.

Waste Discharge Requirements and National Pollutant Discharge Elimination System Permits

The State Water Board and Central Valley Regional Water Board regulate discharges of waste to land and into waters of the state (i.e., surface water or groundwater) through WDRs, which are authorized under the state Porter-Cologne Water Quality Control Act, and through National Pollutant Discharge Elimination System (NPDES) permits, which are authorized under Section 402 of the CWA.

A Regional Water Board NPDES stormwater permit for general construction activity applies to general ground-disturbing construction activity greater than one acre. Before construction of such projects, applicants must submit to the Regional Water Board a Notice of Intent (NOI) to discharge stormwater and must prepare a Storm Water Pollution Prevention Plan (SWPPP). A SWPPP generally describes proposed construction activities, receiving waters, stormwater discharge locations, best management practices (BMPs) that will be used to reduce project construction effects on receiving water quality, and the BMP inspection and monitoring methods. A number of *good housekeeping* BMPs are also generally included in a SWPPP to control waste discharges during the dry months. An appropriate selection of post-construction permanent pollution control and treatment measures must also be considered for implementation where necessary to prevent long-term water quality impairment.

The Regional Water Board administers a general WDR process for low-threat discharges from construction dewatering activities that discharge to surface waters (i.e., removal of accumulated water during excavation). An NOI is required before the activity, and the general order contains a set of standard terms and conditions for compliance with discharge prohibitions, specific effluent and receiving water limitations, solids disposal activities, water quality monitoring protocols, and applicable water quality criteria. The Regional Water Board can also issue waivers to WDRs for low-threat discharges if the wastes would not be discharged directly into water and would not be exposed to stormwater runoff that could enter surface waters.

Other Regulations for Water Quality Protection

The following other regulations related to water quality conditions are described in other sections of this DEIR:

- ▶ **CWA, Section 404.** Under Section 404, USACE regulates and issues permits for activities that involve the discharge of dredged or fill materials into “waters of the United States,” including wetlands. See Section 4.4, “Biological Resources.”
- ▶ **Section 1600 et seq. of the California Fish and Game Code.** All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources is subject to regulation by DFG, pursuant to Sections 1600 through 1603 of the California Fish and Game Code. See Section 4.4, “Biological Resources.”

These regulatory programs typically impose specific measures to reduce water quality impacts on wetlands and aquatic habitat. Local grading and erosion control ordinances may also apply.

4.3.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

These significance thresholds are based on relevant provisions of CEQA, the State CEQA Guidelines, environmental questions in Appendix G of the Guidelines, and significance criteria used in other relevant environmental compliance documents for similar projects.

The proposed project would be considered to have a significant effect on the hydrologic environment or on water quality if it would:

- ▶ Cause an increase in the flood stage (i.e., water surface elevation) that would pose a significant risk to people, structures, or the operation of flood control infrastructure;
- ▶ Expose people, structures, or flood control infrastructure to a significant increase in the risk of flood hazard from the 100-year flood;
- ▶ Result in a substantial degradation of surface water or groundwater quality such that it would violate criteria or objectives identified in the Central Valley Regional Water Board Basin Plan, or otherwise substantially degrade water quality to the detriment of beneficial uses;
- ▶ Result in a substantial depletion of groundwater supplies or interfere with groundwater recharge such that a net deficit in aquifer volume or a lowering of the local groundwater table level would occur;
- ▶ Result in a substantial alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in a substantial increase in erosion or siltation;
- ▶ Result in a substantial increase in sediment in the Sacramento River; or
- ▶ Result in a substantial alteration of water temperatures in the Sacramento River.

ANALYSIS METHODOLOGY

Both quantitative and qualitative methods were used to assess the potential impacts of the proposed project on hydrology, water quality and geomorphology. Because of the availability of an appropriate hydraulic model, quantitative methods were used to assess the proposed project-related changes to local and downstream flood hydrology and, combined with qualitative methods, changes to geomorphic processes.

Project Modeling

The potential hydraulic effects of ~~modifying the vegetation~~ berm removal and changing land cover types on the Singh and Nicolaus properties (located between RM 194 and RM 195) were quantitatively estimated through modeling efforts, which are presented in the *Hydraulic Analysis for Flood Neutrality on Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties, Sacramento River, Mud Creek, and Big Chico Creek* ~~RM 194-195~~, dated ~~December 2007~~ May 30, 2008 (Appendix B). The modeling evaluation was based on an updated existing two-dimensional hydraulic model ~~of the 29-mile reach of the Sacramento River between RM 183 and RM 212~~ that was used to evaluate the hydraulic effects of habitat restoration ~~and levee setback options~~ and berm removal. The hydraulic model for the project extends along the Sacramento River from RM 196.5 at the upstream end to RM 191 at the downstream end, with the lower three miles on both Mud Creek and Big Chico Creek (see Figure 1 of Appendix B). Flow data used for this model was the peak flow data from the January 1995 flood event published by USGS. For additional information on the assumptions included in this model, refer to the complete report in Appendix B.

Existing models used for large-scale, planning level examinations of the river's hydraulics, such as the USACE Comprehensive Study, would not have been detailed enough to evaluate the specific changes of each area modeled in the *Hydraulic Analysis for Flood Neutrality* ~~*Flood Neutral Hydraulic Analysis*~~. The model results presented below are more detailed than those of the Comprehensive Study model and are sufficient for an investigation of project feasibility.

Addressing Uncertainties

Project condition hydraulic modeling relies on the formulation of reasonable assumptions and, most importantly, calibration efforts to accurately reflect the existing conditions and consequences of future management. The use

of different assumptions in modeling may lead to conclusions that overestimate or underestimate the impact or benefits of implementing the proposed project. The hydraulic modeling was conducted with steady-state conditions (i.e., evaluation of unchanging model parameters to reflect the assumption of a single set of field conditions) and calibration involved assigning generalized roughness values to existing and restored surfaces. Wherever possible, model input variables were calibrated against actual field data such as high water marks collected by DWR during high flow events. Also, wherever possible, local residents were contacted and involved in model calibration efforts. Local residents provided important calibration data such as aerial photographs of their lands taken during and following flood events that show debris lines left at high water marks. These efforts ensured the best possible reflection of current conditions within the models to allow for the most accurate representation of future conditions resulting from the project.

While changes in the channel and stage elevations resulting from natural geomorphic processes (e.g., sediment transport, meander migration, and chute cutoffs) are not captured in the model and may affect the accuracy at small, localized areas; net changes throughout the entire modeled area are expected to be relatively accurate and therefore potential inaccuracies in the model are considered inconsequential in terms of hydraulic analyses for the overall modeled areas. The models also used the most conservative roughness coefficients for all restored units based on conditions described below for all vegetation types. These conditions would represent the worst-case scenario (i.e., conditions that could potentially result in the highest probability for increased flood stage to occur).

Based on monitoring data collected over a 15 year period at 106 long-term monitoring sites, relationships were developed between site characteristics and resulting vegetation communities (TNC 2003a and b). These relationships were used to develop the most realistic planting plan that could be expected within a restoration site. In other words, an area that is very likely to become denser forest is modeled as such. Likewise, an area that would likely remain less dense is modeled as such. This approach precludes the need for future maintenance of these sites and provides the most conservative approach to analysis with hydraulic models.

IMPACT ANALYSIS

IMPACT 4.3-a **Changes in Flood Hydrology.** *The proposed project would have the potential to change local and downstream flood hydrology on the Sacramento River by changing vegetation densities and land cover types on the floodplain. Modeling results predicted no increase in flood stage elevation due to the project and a small section of decrease in flood elevation of approximately 0.10 foot near the oak savannah habitat on the Nicolaus property. Localized changes in flood stage elevations up to 0.10 foot on State Parks land along with an up to 0.20 foot decrease on the northern private property. This small change does not represent an increase that would not pose a significant risk to people, structures, or the operation of flood control infrastructure and does not violate existing regulations for risk to flood control infrastructure. Project-related changes in local and downstream flood hydrology would be less than significant.*

The proposed action would restore orchards to riparian forest, grassland, and savannah communities and develop recreational facilities (see Exhibits 3-7 through 3-9). Some restored areas would have riparian vegetation more dense than current vegetative conditions (i.e., orchards) while areas planned for recreational facility development would be less dense than current conditions. Such changes could cause increases and decreases in the velocity of flood flows that may seasonally inundate the area. When flow velocity decreases as a result of increased friction (i.e., roughness), the water surface elevation may rise. Potential changes in water surface elevations were evaluated in the hydraulic modeling (described above and in Appendix B) using conservative assumptions of projected changes in vegetation densities (restoration) and land cover types (recreation facilities) in the project areas and existing floodplain corridor at the modeled peak flows.

The proposed project condition includes the creation of an access roads, parking, trails, campgrounds, the restoration of approximately 1506 acres to native vegetation communities, and the removal of earthen berms along the bank of Mud Creek. All new recreation facilities would be designed and constructed as prescribed in Park Plan Goal AO-3.1 and Guideline AO-3.1-1. The hydraulic modeling report analysis (Appendix B) shows

very little change in water surface elevations within the modeled area (Figure 1 of Appendix B), which includes the Nicolaus property, the Singh Unit, adjacent private agricultural lands to the north and east as well as adjacent public lands. The modeling predicted that the project would not result in any increases to water surface elevation, but would result in a small section of decrease of approximately 0.10 foot near the oak savannah habitat zone on the Nicolaus property, the predicted changes in water surface elevations for the modeled subreach, which includes areas of both increased and decreased flood stage elevation. Minor increases (i.e., less than 0.10 foot) occur along the southern edge of the Singh property in areas adjacent to the swale that runs through the entire property and into Big Chico Creek. This minor increase in flood stage elevation would be localized and likely due to flood waters backing up the swale drainage south from Big Chico Creek. Also, a minor decrease (i.e., less than 0.10 foot) in water surface elevation occurs along the northeastern edge of the Nicolaus property possibly due to the removal of earthen berms along Mud Creek. This decrease in flood elevation would occur mainly in the area north of the project area but spills into the very northern edge of the Nicolaus property. Modeling shows that the project does not appear to change flood water depth in the area where recreational facilities are planned.

The modeling results indicate that implementation of the proposed project would not increase water surface elevation during a design flood no more than 0.10 foot on State Parks land along with an up to 0.20 foot decrease on the northern private property on the project site or adjacent properties. The is small decrease in flood stage elevation on the Nicolaus property change would not pose a significant risk to people, structures, or the operation of flood control infrastructure and does not violate existing regulations for risk to flood control infrastructure. Furthermore, implementation of the proposed project would not be anticipated to result in adverse effects downstream near the flood control project levees (beginning on the west bank levee at approximately RM 184 and the east bank levee at RM 176 and continuing southward) as a result of the small, localized changes in water surface elevation in the project area.

The potential project-induced changes in surface water elevation during flooding conditions would be small, localized, and would not increase the area inundated by flood flows. Therefore, this impact is considered *less than significant*.

IMPACT 4.3-b *Changes in Geomorphic Processes. Increasing vegetation densities (habitat restoration) and changing land cover types (recreation facility development) on the floodplain would alter water velocities in the existing floodway in the project area, possibly changing sediment transport, channel scouring, and meander migration. Modeling predicts slight increases in velocities around the Nicolaus oak savanna habitat as well as the grasslands on both sides of the Singh Unit flow-through area requested by neighbors to the north of the Singh Unit. There would be an increase in velocities within and north of the Singh flow-through area. However, any potential changes in velocities would be too small to substantially affect channel hydraulics or lead to erosive forces that could affect this already dynamic system. The changes in geomorphic processes resulting from restoration activities would be less than significant.*

Erosion and deposition patterns in the river and floodplain would not be expected to change substantially as a result of the proposed project. The project-related changes in vegetation and land use cover types (recreational facilities) in the portion of the river area modeled with the two-dimensional model (Figure 1 of Appendix B) (RM 194 to RM 195) are not expected to significantly affect river velocities. At the modeled flow, the velocity contours in Figures 6 and 7 of Appendix B show that the flood flow velocity is between 0.0 and 3.5 feet per second (ft/s) in the project areas for both the existing condition and the with-project condition. maximum velocities are predicted to be less than 2 feet per second (ft/s) and velocity changes are expected to be negligible in most of the project area (Appendix B). The largest changes in velocity due to the project would be an increases of up to 1.75 2.0 feet per second within the swale that runs north-south in the western half of the Singh Unit. These This increases in velocity would be due to the conversion from orchard to meadow grasses in the natural low-lying swale. The existing velocity in that area is roughly 1.0 ft/s, and as long as the passageway remains vegetated, this increase should not have any harmful effects. The project would also result in velocity increases on the Singh Unit adjacent to Mud Creek of up to 0.5 ft/s (from 0.5 ft/s to 1.0 ft/s) due to the removal of the berm adjacent to Mud Creek. The removal of the berm from the southwestern boundary of the Singh Unit would cause

an increase in that area of up to 0.7 ft/s (from 0.7 ft/s to 1.4 ft/s), but would also slightly reduce the velocity on the east bank of the Sacramento River adjacent to the site. The proposed grassland buffers would cause an increase in flood flow velocity on the west side of the Singh Unit and Nicolaus property, with the greatest increase being 1.2 ft/s (from 1.0 ft/s to 2.2 ft/s) at the southwestern boundary of the Nicolaus property. Small increases in flow velocity (0.25 to 1.0 ft/s) would also be anticipated for the oak savannah area near the planned recreational facilities on the Nicolaus property. These minor changes would not be expected to substantially alter sediment transport and deposition within the project area.

Natural geomorphic processes of sediment transport, bank scour, and point bar formation currently exist in this dynamic and meandering river. The proposed changes in vegetation densities and land cover types on the floodplain are relatively small and are not expected to substantially alter the way the system currently functions. Modeling results show that the creation of impervious surfaces associated with recreational facilities would not change geomorphic processes as changes in velocities through the area would not be substantial enough to result in changes in sediment transport and/or deposition. The area to be converted to recreational uses is a small proportion of the greater floodplain and would be surrounded by native vegetation. Additionally, primary geomorphic channel forming processes are most prevalent at bankfull stage (1.5- to 2-year recurrence interval) flows. When flood stages rise above bankfull levels, erosive forces in channels are typically decreased as flows spill onto the floodplain resulting in energy dissipation. All of the proposed restoration and recreation facility development activities would occur on the floodplain above the bankfull stage elevation, thus decreasing any affects that may result from these activities.

Also, the restoration of native riparian habitat in the project area on lands that once supported a naturally functioning riverine ecosystem is considered beneficial for reducing the direct and indirect adverse effects of erosion and sediment deposition in the river. It has been demonstrated that floodplains of the Sacramento River are less prone to erosion and more stable when riparian habitat is present as opposed to agricultural land cover (Micheli et al., 2004). Therefore, the ~~M~~minor changes in geomorphic processes resulting from proposed project activities would be *less than significant*.

IMPACT **Temporary Effects on Water Quality Associated with Proposed Project Implementation.**

4.3-c *Implementation of the project would be accomplished through the use of standard agricultural practices (already being used throughout the project site) and construction activities. Restoration activities would include orchard removal, discing, seeding, planting, and temporary herbicide use. Irrigation system modification and expansion would include standard trench and backfill techniques. Development of recreational facilities would include grading and compaction of park roads and parking spaces, and the installation of park trails, buildings, shelters, and restroom facilities. Utilization of standard agricultural practices for restoration implementation would not be expected to cause soil erosion and/or sedimentation of local drainages or the Sacramento River channel. However, potential temporary effects on water quality associated with the construction of recreational facilities could be **potentially significant**.*

Land-disturbing construction activities for the proposed restoration of riparian communities would be minimal because habitat restoration efforts would involve planting operations entailing minimal ground disturbance (tilling and grading). In orchard areas where trees are removed, native vegetation would be replanted directly following site preparation to prevent the possibility of severe erosion from disturbed, unprotected soils. In general, proposed restoration-related activities would occur during the dry season and standard agricultural grading and erosion control practices would be implemented to avoid and minimize potential discharges of runoff from the disturbed areas.

The conversion of orchard to recreation facilities including the creation of roads, parking spaces, campgrounds, trails, and related buildings would involve grading and other non-agriculture-related construction activities. These construction activities would disturb existing vegetation cover and soils, would expose areas of disturbed ground that could be exposed to rainfall and erosion, and could cause temporary discharges of sediment and other contaminants in stormwater runoff to drainage channels and the Sacramento River. Petroleum products or other

construction-related substances (e.g., concrete, asphalt, paint, etc.) also could be discharged inadvertently to the Sacramento River or other waterways via stormwater runoff. Because development of recreational facilities could result in the discharge of construction-related substances into the Sacramento River, implementation of the proposed project could result in a *potentially significant* impact to water quality.

IMPACT Long-Term Effects on Water Quality and Water Temperature in the Sacramento River. *Replacing flood-prone agriculture with restored riparian habitat would decrease pesticide and herbicide applications on land adjacent to the river, thereby improving water quality. Additionally, restored riparian forests would buffer and filter toxic and organic matter that originate further away from the river, thereby further enhancing water quality. Restoring native riparian habitat would have no discernible effect on water temperature, and may actually have a moderating effect on water temperature over the long-term. The development of recreational facilities would involve the conversion of orchards to roads, campgrounds, trails, and other facilities; which would increase human uses and potentially result in the degradation of runoff water quality from the project site. However, human uses of these areas would generally be low-intensity and facilities would be managed to minimize potential water quality effects. This impact would be less than significant.*

4.3-d

Inundation of agricultural areas could cause transport of pesticides, herbicides, or hazardous waste residues that are present as a result of historical agricultural land uses. Replacing flood-prone agriculture with restored riparian habitat would decrease pesticide and herbicide applications on land adjacent to the river, thereby increasing water quality. Additionally, consistent with Park Plan Goals ER-1.1 and ER-3.2 and Guidelines ER-1.1-1, ER-1.1-2, ER-3.2-1, and ER-3.2-2 restored riparian forests would buffer and filter toxic and organic matter that originate further away from the river, thereby further enhancing water quality. Measurable changes in water temperatures are not expected to result from the proposed restoration activities. In the long-term, mature riparian forest could provide additional shading of the drainage channels resulting in potential beneficial effects on water temperature.

In the area of the Nicolaus property where orchards would be converted to recreational facilities, there would likely be limited long-term water quality impacts due to human recreation activities on-site. The project would create a road, ~~recreational vehicle campsites~~, vehicle camp sites, and walk in campsites that would all generate vehicle and pedestrian traffic within the project site. Vehicle traffic could leave oil, gas, and other chemical residues on the roads that could be picked up by runoff and/or flood flows and transported into the Sacramento River. The majority of these residues would accumulate throughout the summer and fall when uses are highest, and conveyed into the Sacramento River in the winter or spring during large precipitation events or flood conditions. However, human uses would generally be low-intensity and the expected amount of contaminants deposited on the project site would likely be comparable to the existing conditions due to agricultural-related equipment and vehicles.

Potential impacts to water quality due to the restroom/shower facility, vault toilets or septic system leach field would be minimal, as these facilities would be designed and operated to prevent any potential wastewater discharge under flood flow conditions in compliance with State Water Quality Control Board requirements. The existing Nicolaus property farm complex, including the existing septic system/leach field, is above the normal flood stage. This existing septic system would be used to service the relocated BSRSP headquarters. A new septic system/leach field would be installed above the normal flood stage (such as near the Nicolaus farm complex) to service the combination restroom/shower building. These septic systems would be outside of the normal flood levels and in preparation for more extreme flood events, the check-valves at the facilities could be turned off. The other restroom facilities would be pre-manufactured vault toilets placed on raised pads. Vault toilets are impervious to water, which is why they are safe to use in floodplains and why they require pumping for maintenance. In preparation of flood events, the vault toilets would be pumped, hosed out, and sealed. By cleaning and sealing the vault toilets, these facilities do not leak wastewater during flood events.

BSRSP monitors real-time flow conditions at upstream locations to monitor for potential flood conditions at the Park. When there is indication of potentially approaching flood levels, standard BSRSP maintenance measures are enacted, including: removing equipment and vehicles from potentially effected park and service yards to higher

ground; turning off utilities (electricity, water, and gas); pumping and sealing vault toilets; and cleaning and sealing restroom/shower buildings (sand bags in toilets, urinals, floor drains and door thresholds; sink drains and door jams are duct taped; water heater removed if not installed above flood threat). Additionally, after flood events, the septic tanks are pumped (Akers 2007). As part of BSRSP, the facilities on the Singh Unit and the Nicolaus property would be subject to these maintenance measures.

Potential impacts to water quality from restroom/shower facility vaults and/or leachfields would be minimal as these facilities would be designed and operated to minimize any potential wastewater discharge to the river under flood flow conditions. BSRSP monitors real-time flow conditions at upstream locations to monitor for potential flood conditions at the Park. When there is indication of potentially approaching flood levels, equipment and vehicles are removed from potentially effected park and service yards to higher ground; utilities (i.e., electricity, water, and gas) are turned off; restrooms are sealed (sand bags in toilet, urinal, floor drains and door thresholds; sink drains and door jams are duct taped; water heater removed if not installed above flood threat). Additionally, after flood events, the septic tanks are pumped (Akers 2007).

Long term project-related changes in water quality would be expected to improve in restored areas and any potential adverse impacts would be less than significant in areas where recreational facilities are proposed. Therefore, this impact would be *less than significant*.

IMPACT **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. The conversion of orchards to native vegetation would require less water for irrigation; especially after planted vegetation has become established. An existing domestic groundwater well ~~One~~ would remain in-use to provide water for recreational facilities; ~~however, there would be a~~ The net decrease in water demand/use compared to existing conditions. ~~This decrease in water demand is considered a~~ **beneficial effect.***

4.3-e

The Singh Unit has one groundwater well with a current capacity of approximately 500 gallons per minute (Luster 2007). There are five groundwater wells on the Nicolaus property. Four of the wells are intended for agricultural use; however, only one of the agricultural wells (located in the north-central part of the property) is used to water the entire orchard. This well has a current capacity of approximately 1,800–2,000 gallons per minute (Luster 2007). The other three agricultural wells are drilled and cased and could be functional, although they do not currently have pumps or motors. The fifth well is the existing domestic water source, with a capacity of approximately 25 gallons per minute, which is located adjacent to the existing farm house.

The proposed project would remove land from irrigated agricultural use. Habitat restoration activities would require irrigation for the first three years until the native vegetation becomes established. ~~The Singh Unit has one groundwater well with a current capacity of approximately 500 gallons per minute and the Nicolaus property has one groundwater well with a current capacity of approximately 2,000 gallons per minute (Luster 2007).~~ Based on similar riparian habitat restoration projects that TNC has implemented, the first year of the restoration project is anticipated to utilize an approximately equivalent amount of water to the existing orchards for irrigation to support the establishment of the new riparian vegetation. In the second year, the restoration area would require approximately half the water that the existing orchards utilize, and in the third year, the restoration area would use approximately one-quarter of the current water usage. Once established, vegetation in the restored project area would not require continued irrigation; therefore, from the fourth year onward, the long-term water usage would be reduced to zero. Therefore, is sufficient water supply from the groundwater wells on the Singh Unit and the Nicolaus property to support the irrigation needs to establish the new vegetation in the restoration areas. Additionally, the long-term water use on both the Singh Unit and the Nicolaus property would be substantially less than the current agricultural demands.

The agricultural groundwater wells on the Singh Unit and the Nicolaus property would provide irrigation water for the first three years of restoration and would remain active as long as the wells remain productive.

When these groundwater wells on the Singh Unit are no longer productive and/or no longer necessary to support the restoration area, ~~if they~~ they would be properly decommissioned according to DWR specifications (filled and capped). The decommissioning of the wells would prevent infiltration of floodwater into ~~an~~ uncapped wells that could otherwise contaminate the local groundwater aquifer surrounding the wells with surface contaminants carried in flood flows.

The domestic water well on the Nicolaus property, located adjacent to the farmhouse, would continue to be used to serve the BSRSP headquarters (relocated to be in the farm buildings) and the recreational facilities on the Nicolaus property.

~~The groundwater well on the Nicolaus property would remain active, as long as the well remains productive, to not only provide irrigation to the restoration area for the first 3 years, but also to provide water for the proposed recreation facilities. There is sufficient water supply from this groundwater well (approximately 2,000²⁵ gallons per minute) to support the irrigation needs to establish the new vegetation in the restoration area (as described above) and to supply the proposed recreation facilities once they are operational. The long-term recreational facilities' water use would be substantially less than the current agricultural demands on the Nicolaus property similar to the existing use for the farm complex. An onsite water treatment facility would be installed to maintain acceptable water quality levels from this domestic groundwater well as regulated by the State Division of Drinking Water.~~

Ceasing agricultural practices in the project area would benefit adjacent and downstream agricultural lands by substantially decreasing long-term water use and by allowing groundwater levels to recharge via habitat restoration, which would improve the natural hydrology of the site. Therefore, implementation of the proposed project would result in *beneficial* long-term changes in water demand and available groundwater supply.

4.3.4 MITIGATION MEASURES

Mitigation Measure 4.3-c: Acquire Appropriate Regulatory Permits and Implement SWPPP and BMPs.

Before the approval of grading permits and improvement plans for proposed recreational facilities, the project applicant shall obtain a SWRCB statewide NPDES stormwater permit for general construction activity, and any other necessary site-specific WDRs or waivers under the Porter-Cologne Act. The project applicant shall prepare and submit the appropriate Notice of Intent (NOI) and prepare the SWPPP with BMPs and any other necessary engineering plans and specifications for pollution prevention and control.

Implementation of Mitigation Measure 4.3-c would reduce Impact 4.3-c to a *less-than-significant* level.

4.4 BIOLOGICAL RESOURCES

This section includes an analysis of the potential effects of the proposed project on biological resources, including plants, wildlife, and fish that occur or have the potential to occur in the project area. The analysis tiers off of the Bidwell-Sacramento River Park (BSRSP) General Plan and Draft Environmental Impact Report (Park Plan) which considered the potential impacts to biological resources resulting from implementation of the Park Plan (Park Plan Section 4.6.4). As described in Chapter 1 of this EIR, the proposed project actions are consistent with those identified in the Park Plan.

4.4.1 ENVIRONMENTAL SETTING

SOURCES OF INFORMATION

The information presented in this section is based on review of existing documents and other relevant information, including aerial photography, habitat maps, and biological resource databases. The following documents were reviewed during preparation of the biological resources analyses:

- ▶ California Department of Parks and Recreation. 2003 (December). *Bidwell-Sacramento River Park General Plan and Draft Environmental Impact Report*. Prepared by EDAW, Sacramento, CA.
- ▶ California Bay-Delta Authority. 2005 (June). *Sacramento River–Chico Landing Subreach Habitat Restoration Project Draft Environmental Impact Report*. Prepared by EDAW, Sacramento, CA.
- ▶ U.S. Fish and Wildlife Service. 2005a (July). *Comprehensive Conservation Plan and Environmental Assessment–Sacramento River National Wildlife Refuge*. California/Nevada Refuge Planning Office, Sacramento, CA.
- ▶ California Department of Fish and Game. 2003. *Comprehensive Management Plan for the Sacramento River Wildlife Area*.
- ▶ California Department of Parks and Recreation. 2007 (August 31). *Riparian Habitat Restoration Plan for the Nicolaus Property Sacramento River (RM 195)*. Prepared by The Nature Conservancy, North Central Valley Office, Chico, CA.
- ▶ California Department of Parks and Recreation. 2007 (December). *Riparian Habitat Restoration Plan for Singh Unit Sacramento River (RM 194)*. Prepared by The Nature Conservancy, North Central Valley Office, Chico, CA.

Documents that provided information relevant to this analysis are cited throughout this section, and corresponding references are included in Chapter 9, “References.”

In addition to the resources listed above, EDAW biologists conducted a reconnaissance survey of the project area on September 27, 2007. The biologists walked the full extent of both parcels, including the riparian habitats along Mud Creek and Big Chico Creek.

REGIONAL CONTEXT

The proposed project area is located in the floodplain of the Sacramento River between river miles (RM) 195 and 194. Both the Singh and Nicolaus units are within the “Inner River Zone,” which is defined as the estimated portion of river system that has experienced river channel migration in the past 100 years and is likely to experience channel movement over the next 50 years (Sacramento River Conservation Area Forum [SRCAF] 2002).

The biological resources of the project area are shaped and supported by the physical and hydrological patterns of the Sacramento River system. As is characteristic of the middle Sacramento River, major physiographic features of the project area include floodplains, basins, terraces, active and remnant channels, and oxbow sloughs. These features, together with the historic and current hydrologic and dynamic meander patterns of the Sacramento River, provide for a diverse array of riparian plant communities along the river channel. The majority of the historic riparian forest habitat in California was converted over the past 150 years to agricultural, urban, and rangeland uses, and many river systems are now bounded by levees. Conversion of riparian habitat along the Sacramento River was extensive, as well; however, much of the river between Red Bluff and Colusa remains unleveed, enabling substantial areas of remnant riparian communities, especially in the Inner River Zone. As a result of the conversion, most of the mature valley oak woodland and savannah and other mature riparian forest community types further from the river's edge are now absent from much of the Sacramento River corridor.

In the reach adjacent to the Singh and Nicolaus properties, the Sacramento River is a large, meandering river. Large gravel bars are common throughout the greater reach, often becoming islands as channels shift. In certain stretches, riparian vegetation and floodplain areas remain connected to the river due to the lack of narrowly spaced levees. Flows vary seasonally due to precipitation patterns and release schedules out of Shasta Dam. In the winter and spring of high precipitation years the Sacramento River reaches high flow levels and spills onto its floodplain. In the project vicinity, the Sacramento River may expand into the project site and/or back up Big Chico and Mud creeks to flood the project area. See Section 4.3, "Hydrology, Water Quality, and River Geomorphology," for a discussion of the current hydrological and geomorphological conditions of the project area.

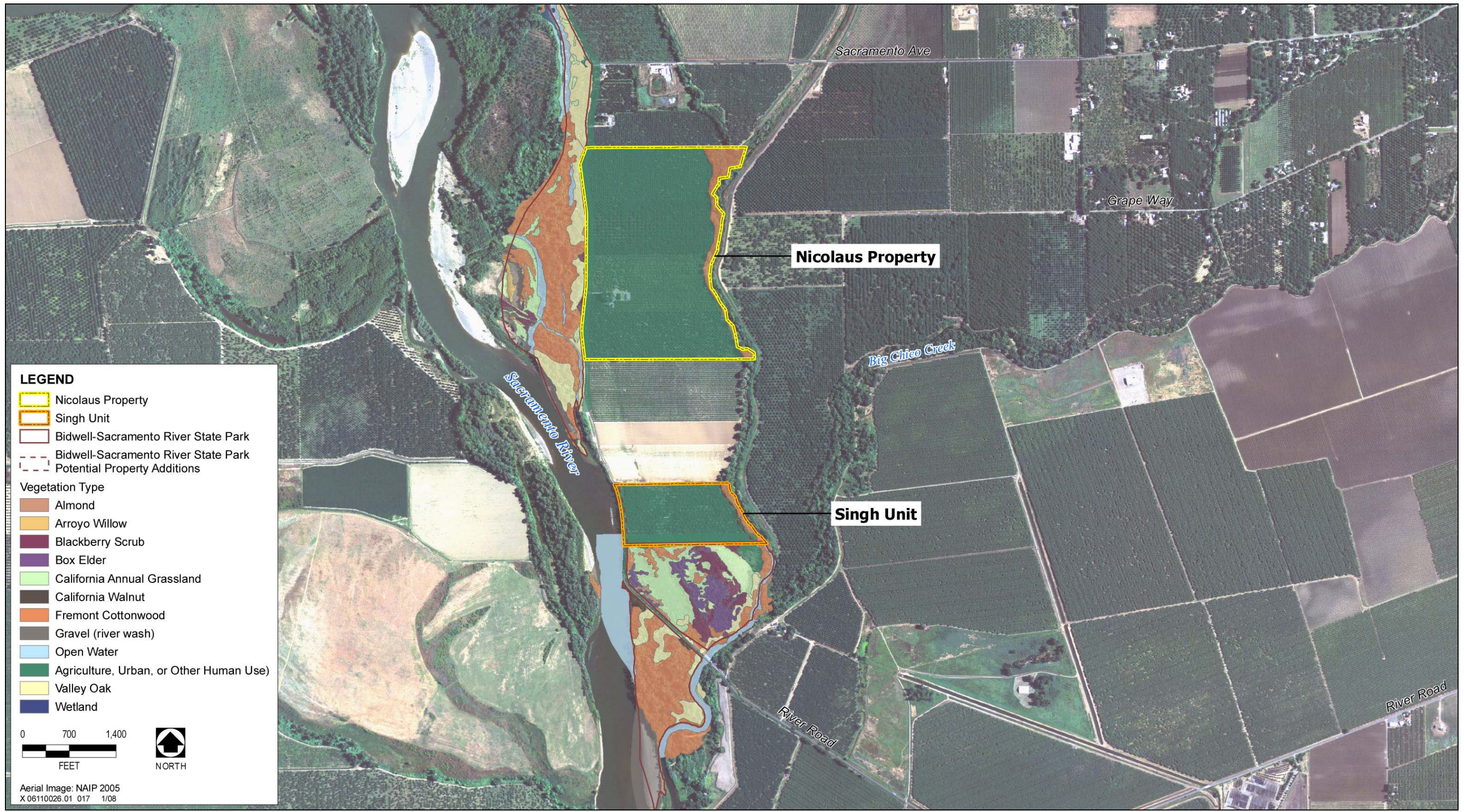
HABITAT TYPES

The Singh Unit and Nicolaus property are presently in walnut and almond orchard production, the two crop types in the project area where project activities are planned to occur. The adjacent lands support a variety of habitat types, including orchards, row crops, blackberry scrub, willow scrub, cottonwood riparian forest, mixed riparian forest, valley oak woodland, and freshwater marsh. The only native habitat type present within the parcel boundaries are narrow stands of cottonwood riparian forest on the eastern edge of the properties along Mud Creek. The location and extent of the habitat types present in the project area are depicted in Exhibit 4.4-1. Descriptions of native habitat types occurring in the project area are based on those contained in Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986) and the California Manual of Vegetation (Sawyer and Keeler-Wolf 1995).

Cottonwood riparian forest is a tall, dense, winter deciduous riparian forest dominated by Fremont cottonwood (*Populus fremontii*) and one or more species of willow (typically Goodding's black willow [*Salix gooddingii*] in the project area). The understory vegetation is dense and typically includes seedlings and saplings of shade tolerant species such as California box elder (*Acer negundo* var. *californica*) and Oregon ash (*Fraxinus latifolia*), as well as cottonwood and willow seedlings and saplings. Vines such as California wild grape (*Vitis californica*) are also common. This habitat type is referred to as Fremont Cottonwood Series in the *Bidwell-Sacramento River Park General Plan and Draft Environmental Impact Report*.

NONNATIVE INVASIVE PLANT SPECIES

Nonnative (exotic, alien, non-indigenous) species are those that have been introduced through human activities, either incidentally or deliberately. Many nonnative plant species are not invasive and do not have adverse effects on native plant and animal communities. However, some invasive nonnative species have resulted in the transformation of native plant communities to nonnative plant communities with fewer native plants and degraded wildlife habitat. Table 4.4-1 contains a list of invasive species known to occur within the project area.



Source: GIC 2003, DPR 2003, and NAIP 2005

Existing Habitat Types in the Project Area

Exhibit 4.4-1

**Table 4.4-1
Invasive Plants Known to Occur in the Project Area**

Scientific Name	Common Name	Cal-IPC/State Status ¹
<i>Ailanthus altissima</i>	Tree-of-heaven	Moderate/P
<i>Arundo donax</i>	Giant reed	High/P
<i>Centaurea solstitialis</i>	Yellow starthistle	High/C
<i>Conium maculatum</i>	Poison hemlock	Moderate/--
<i>Eucalyptus camaldulensis</i> , <i>E. sp.</i>	Red gum, eucalyptus	Moderate/-- (<i>E. globulus</i>)
<i>Ficus carica</i>	Edible fig	Moderate/--
<i>Juglans californica</i> (orchard rootstock or other hybrids ²)	California walnut	--/--
<i>Lepidium latifolium</i>	Perennial pepperweed	High/B
<i>Parthenocissus cinquefolia</i>	Virginia creeper	--/--
<i>Prunus dulcis</i> , <i>P. sp.</i>	Almond, prune (orchard rootstock)	Limited/--
<i>Robinia pseudoacacia</i>	Black locust	Limited/--
<i>Rubus armeniacus</i>	Himalayan blackberry	High/--
<i>Tamarix parviflora</i>	Tamarisk, salt cedar	High/P
<i>Vinca major</i>	Periwinkle	Moderate/--
<i>Phytolacca Americana</i>	Common poleweed	--/--

¹ Cal-IPC Status:

High = species that have severe ecological impacts on physical processes, plant and animal communities and vegetation structure; widespread.

Moderate = species with substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities and vegetation structure; regional

Low = species that are invasive but their ecological impacts are minor on a statewide level; species that may be locally persistent and problematic

State (CDFA) Status:

B = Eradication, containment, control or other holding action at the discretion of the commissioner.

C = State endorsed holding action and eradication only when found in a nursery, action to retard spread outside of nurseries at the discretion of the commissioner, reject only when found in a crop seed for planting, or at the discretion of the commissioner.

P = Proposed additions to the CDFR Noxious Weed List in the California Code of Regulations

² The ecology and taxonomy of this species as well as the extent of hybridization between native and nonnative walnut species needs study. It may be considered an invasive plant after further research and evaluation.

Source: Cal-IPC 2006, EDAW 2007

The state and federal government both have laws and regulations protecting commerce and environmental lands from damages caused by invasive plants. The California Department of Food and Agriculture and federal government maintain lists of noxious weeds for the purpose of eradication or control.

The California Invasive Plant Council (Cal-IPC) has developed a list of nonnative plants that pose serious problems in native ecosystems and rangelands (Cal-IPC 2006). These species are classified based on the level of threat and invasiveness. Plants are given an overall rating of “High”, “Moderate”, or “Limited” based on an evaluation of 13 criteria, which are divided into three sections assessing Ecological Impacts, Invasive Potential and Ecological Distribution. Plants with an overall rating of “high” (species that have severe ecological impacts on physical processes, plant and animal communities and vegetation structure; widespread) that were found in the

vicinity of the project area include giant reed, yellow starthistle, Himalayan blackberry, tamarisk, and perennial pepperweed. These species have been documented as aggressive invaders that displace natives and transform or disrupt native habitats. Plants with an overall rating of “moderate” (species with substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities and vegetation structure; regional) that occur in the vicinity of the project area include tree-of-heaven, eucalyptus, periwinkle, poison hemlock and edible fig. Plants in the project area with an overall rating of “limited” (species that are invasive but their ecological impacts are minor on a statewide level; species that may be locally persistent and problematic) include black locust and wild almond.

WILDLIFE

The current wildlife habitat value of the project site is limited, as both properties are actively managed for walnut and almond production, and are kept clear of understory vegetation. Walnut and almond orchards support a relatively low diversity of wildlife species, and typically support only those species that are common throughout the Central Valley and occupy a variety of habitats. Common wildlife species that may currently use the project site orchards include American robin (*Turdus migratorius*), the nonnative European starling (*Sturnus vulgaris*), gopher snake (*Pituophis catenifer*), western gray squirrel (*Sciurus griseus*), and the nonnative black rat (*Rattus rattus*).

Remnant native riparian habitats, primarily mixed riparian forest, occur to the west of the Nicolaus property and south of the Singh Unit. These habitats are expected to support a variety of breeding bird species, which have been documented in BSRSP and nearby areas (PRBO 2002, Manolis 1998). Breeding territories of 24 riparian bird species have been documented in and adjacent to the Capay unit of the Sacramento River National Wildlife Refuge, which is located directly across the Sacramento River from the Singh and Nicolaus properties (Gilchrist et al. 2002). Among the more common of these species are black phoebe (*Sayornis nigricans*), western wood-pewee (*Contopus sordidulus*), black headed grosbeak (*Pheucticus melanocephalus*), and spotted towhee (*Pipilo maculatus*). The riparian habitats adjacent to the project site are also expected to support common reptiles and amphibians, such as Pacific chorus frog (*Pseudacris regilla*) and common garter snake (*Thamnophis sirtalis*); and common mammals, such as western gray squirrel (*Sciurus griseus*) and raccoon (*Procyon lotor*).

The project site is also bounded by aquatic habitat and a small amount of freshwater marsh, with Mud Creek forming the eastern border of both properties and the Sacramento River forming the west border of the Singh Unit. These waterways are known to be inhabited by belted kingfisher (*Ceryle alcyon*), mallard (*Anas platyrhynchos*), American beaver (*Castor canadensis*), common muskrat (*Ondatra zibethicus*), and the nonnative bullfrog (*Rana catesbiana*), all of which are expected to occur near the project site.

Orchards and row crops also border the project site, to the north and south of the Nicolaus property and to the north of the Singh Unit. Wildlife common to nearby row crop habitats include killdeer (*Charadrius vociferous*), red-tailed hawk (*Buteo jamaicensis*), house finch (*Carpodacus mexicanus*), western fence lizard (*Sceloporus occidentalis*), desert cottontail (*Sylvilagus audubonii*), and California vole (*Microtus californicus*).

FISHERIES

The Sacramento River provides vital fish spawning, rearing, and/or migratory habitat for a diverse assemblage of native and introduced fish species. Native species include both anadromous (i.e., species that spawn in freshwater after migrating as adults from marine habitat), and resident species. Native anadromous species that occur in the Sacramento River include four runs of chinook salmon (*Oncorhynchus tshawytscha*), steelhead (*Oncorhynchus mykiss*), green and white sturgeon (*Acipenser medirostris* and *A. transmontanus*), and pacific lamprey (*Lampetra tridentata*). Native resident species include Sacramento pikeminnow (*Ptychocheilus grandis*), Sacramento splittail (*Pogonichthys macrolepidotus*), Sacramento sucker (*Catostomus occidentalis*), hardhead (*Mylopharodon conocephalus*), and rainbow trout (*Oncorhynchus mykiss*). Introduced anadromous species include striped bass (*Morone saxatilis*) and American shad (*Alosa sapidissima*). Introduced resident species include largemouth bass

(*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), white and black crappie (*Pomoxis annularis* and *nigromaculatus*), channel catfish (*Ictalurus punctatus*), white catfish (*Ameiurus catus*), brown bullhead (*Ictalurus nebulosus*), bluegill (*Lepomis macrochirus*), green sunfish (*Lepomis cyanellus*), golden shiner (*Notemigonus crysoleucas*), and brown trout (*Salmo trutta*).

Mud Creek, which flows adjacent to the project area before entering Big Chico Creek and, later, the Sacramento River, supports native and nonnative warmwater fish species including many mentioned above. Mud Creek originates at approximately 3,800 feet in elevation in the foothills before flowing approximately 26 miles to join Big Chico Creek. Flows in Mud Creek become extremely low in late summer, which may exclude the presence of many native species including salmon and trout.

Big Chico Creek originates at about 6,000 feet on Colby Mountain and flows for 45 miles to its confluence with the Sacramento River. It supports trout and salmon runs, mainly in mountainous upstream reaches. Similar to Mud Creek, flows in Big Chico Creek become very low as days grow warmer in late summer. Both creeks are bordered by agricultural lands that are protected by levees or earthen berms.

Shaded riverine aquatic vegetation and instream tree and shrub debris provide important fish habitat. Shaded riverine aquatic habitat is defined as the nearshore aquatic habitat occurring at the interface between a river and adjacent woody riparian habitat. The principal attributes of this cover type are: (1) an adjacent bank composed of natural, eroding substrates supporting riparian vegetation that either overhang or protrude into the water; and (2) water that contains variable amounts of woody debris, such as leaves, logs, branches, and roots and has variable depths, velocities, and currents. Riparian habitat provides structure (through shaded riverine aquatic habitat) and food for fish species. Shade decreases water temperatures, while low overhanging branches can provide sources of food by attracting terrestrial insects. As riparian areas mature, the vegetation sloughs off into the rivers, creating structurally complex habitat consisting of large woody debris that furnishes refugia from predators, creates higher water velocities, and provides habitat for aquatic invertebrates. For these reasons, many fish species are attracted to shaded riverine aquatic habitat.

The use of different areas within the project area by fish species is influenced by variations in habitat conditions, each species' habitat requirements, life history timing, and daily and seasonal movements and behavior. Altered flow regimes, flood control, and bank protection efforts along much of the Sacramento River have reduced sediment transport, channel migration and avulsion, large woody debris recruitment, and have isolated the channel from its floodplain in many reaches. Historically, seasonal flooding covered extensive floodplains and provided spawning and rearing habitat for many fish species, including Sacramento splittail and juvenile chinook salmon and steelhead. Flooded areas are highly productive rearing habitats in which young fish tend to grow very rapidly (Jones & Stokes 1999). Levee construction and channel confinement have caused a reduction in the overall amount of seasonal flooding and shallow water habitat in the Sacramento River system. In the winter and spring of wet years, however, some agricultural fields are allowed to flood (e.g., Butte Basin, Yolo Bypass, and Sutter Bypass) during heavy storms and are used by splittail for spawning and rearing, and by chinook salmon and steelhead for rearing.

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources addressed in the following sections include those that are afforded special protection through the California Environmental Quality Act (CEQA), the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), the California Fish and Game Code, and the federal Clean Water Act (CWA).

Special-status Species

Special-status species include plants and animals that are legally protected or are otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. Special-status species addressed in this section include:

- ▶ Species listed or proposed for listing as threatened or endangered under ESA or CESA
- ▶ Species considered as candidates for listing as threatened or endangered under ESA or CESA
- ▶ Species identified by the California Department of Fish and Game (DFG) as California Species of Special Concern
- ▶ Animals fully protected in California under the California Fish and Game Code
- ▶ Plants listed as Endangered or Rare under the California Native Plant Protection Act
- ▶ Plants designated by the California Native Plant Society (CNPS) as List 1B (plants rare, threatened or endangered in California and elsewhere) or List 2 (plants rare, threatened or endangered in California but more common elsewhere)
- ▶ CALFED Bay–Delta Program Multi-Species Conservation Strategy Goals

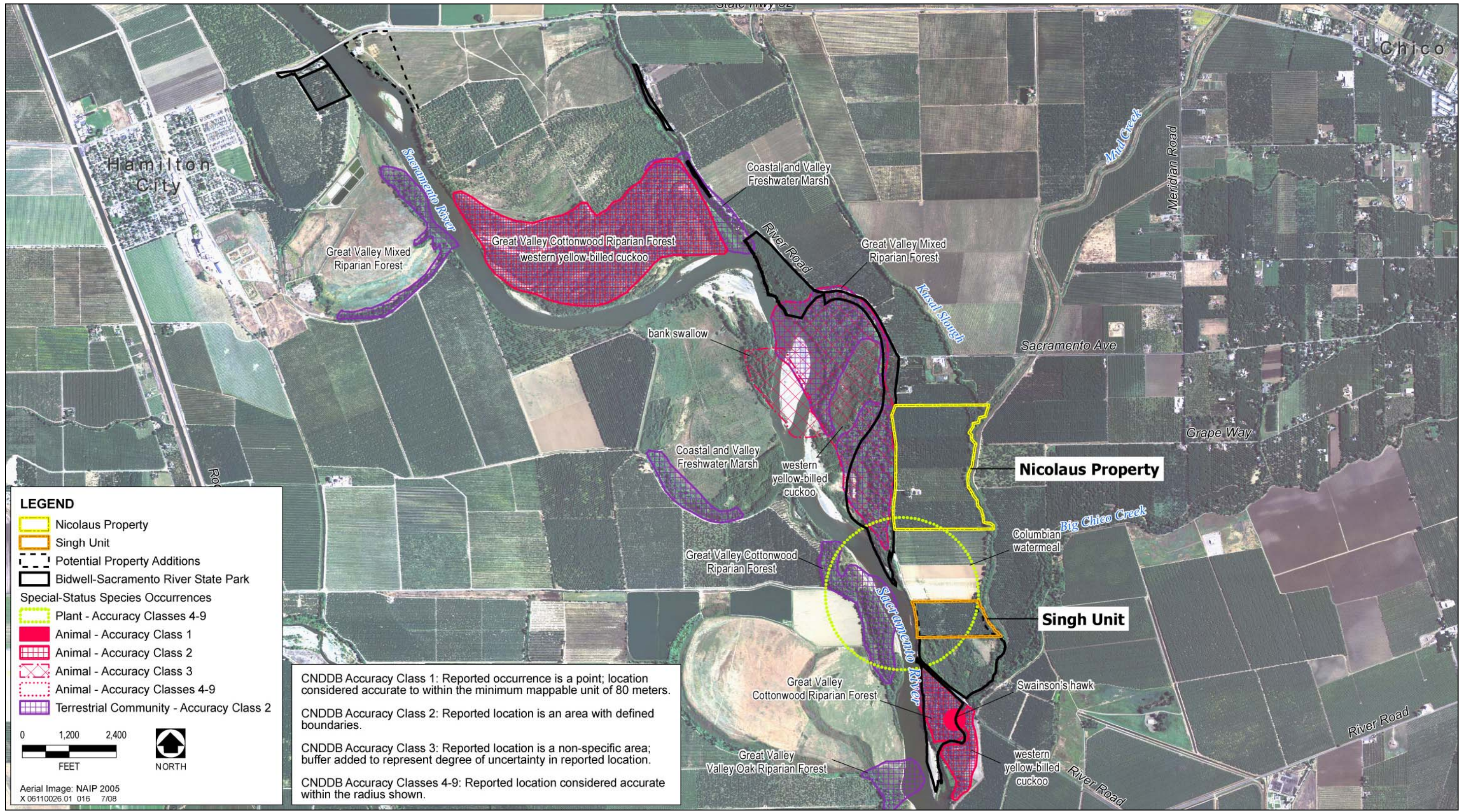
An evaluation of special-status species with potential to occur on and adjacent to the project area was conducted, based on searches of the DFG’s California Natural Diversity Database (CNDDDB) (2007) and the CNPS Electronic Inventory of Rare and Endangered Plants of California (CNPS 2007), review of existing biological resource documents, and a reconnaissance survey on September 27, 2007. CNDDDB and CNPS inventory and searches were conducted for the Ord Ferry, Hamilton City, Chico, Glenn, Llano Seco, Nelson, Foster Island, Nord, and Richardson Springs USGS 7.5-minute quadrangles. Exhibit 4.4-2 shows the location of special-status species that occur in the vicinity of the project area.

Special-status Plants

Existing habitat within the project area is limited to agricultural lands that are currently under cultivation and are consequently not expected to provide suitable habitat for special status plant species. Table 4.4-2 provides information on special-status plants that are known from the vicinity of the project area and that have potential to occur in the riparian habitats adjacent to the existing orchards that characterize the project area. Information regarding each species’ regulatory status, habitat requirements, and blooming period is also provided in the table.

Seventeen species in the database searches are known to occur in the nine quadrangle area surrounding the project area, but were eliminated from the table and from further review because the project area does not contain suitable habitat or they do not typically occur in the project area elevation range. These species are Ferris’s milkvetch (*Astragalus tener* var. *ferrisiae*), round-leaved filaree (*California macrophylla*), pink creamsacs (*Castilleja rubicundula* ssp. *rubicundula*), Hoover’s spurge (*Chamaesyce hooveri*), white-stemmed clarkia (*Clarkia gracilis* ssp. *albicaulis*), recurved larkspur (*Delphinium recurvatum*), Butte County fritillary (*Fritillaria eastwoodiae*), adobe-lily (*Fritillaria pluriflora*), Red Bluff dwarf rush (*Juncus leiospermus* var. *leiospermus*), Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*), veiny monardella (*Monardella douglasii* ssp. *venosa*), Ahart’s paronychia (*Paronychia ahartii*), Butte County checkerbloom (*Sidalcea robusta*), and flagella-like atractyllocarpus (*Atractyllocarpus flagellaceous*).

As listed in Table 4.4-2, seven special-status plant species—fox sedge (*Carex vulpinoidea*), silky cryptantha (*Cryptantha crinita*), four-angled spike rush (*Eleocharis quadrangulata*), rose-mallow (*Hibiscus lasiocarpus*),



Source: DFG 2003, GIC 2003, DPR 2003, and NAIP 2005

Location of Special-Status Species in the Vicinity of the Project Area

Exhibit 4.4-2

**Table 4.4-2
Special-status Plants with Potential to Occur Adjacent to the Project Area**

Species	Status ¹				Habitat and Blooming Period	Potential for Occurrence ²
	Federal	State	CNPS	MSCS Goals ³		
Plants						
Fox sedge <i>Carex vulpinoidea</i>	—	—	2	—	Freshwater marshes and swamps, riparian woodland Blooms May–June	Could occur; suitable freshwater marsh and riparian woodland habitat is present adjacent to the project area.
Silky cryptantha <i>Cryptantha crinita</i>	—	—	1B	m	Gravelly streambeds within cismontane woodland, lower montane coniferous forest, riparian scrub, riparian woodland, and valley and foothill grassland Blooms April–May	Unlikely to occur; suitable gravelly streambeds occur well outside of the project area.
Four-angled spike rush <i>Eleocharis quadrangulata</i>	—	—	2	m	Freshwater marshes and swamps Blooms May–September	Could occur; suitable freshwater marsh is present adjacent to the project area.
Rose-mallow <i>Hibiscus lasiocarpus</i>	—	—	2	m	Freshwater marshes and swamps Blooms June–September	Could occur; suitable freshwater marsh is present adjacent to the project area.
California beaked-rush <i>Rhynchospora californica</i>	—	—	1B	m	Bogs and fens, lower montane coniferous forest, freshwater marshes and swamps Blooms May–July	Could occur; suitable freshwater marsh is present adjacent to the project area.
Sanford’s sagittaria <i>Sagittaria sanfordii</i>	—	—	1B	—	Shallow freshwater marshes and swamps Blooms May–October	Could occur; suitable freshwater marsh is present adjacent to the project area.
Columbian watermeal <i>Wolffia brasiliensis</i>	—	—	2	—	Assorted shallow freshwater marshes and swamps Blooms in April–December	Could occur: A historic population is known from the area around Chico Landing boat ramp in BSRSP.

¹ Legal Status Definitions

CNPS Categories

- 1B Plant species considered rare or endangered in California and elsewhere
- 2 Plant species considered rare or endangered in California but more common elsewhere

² Potential for Occurrence Definitions

Unlikely to occur: Suitable habitat is available on or adjacent to the project area; however, the amount of habitat is limited.
Could occur: Suitable habitat is available on or adjacent to the project area; however, there are little to no other indicators that the species is present.

³ Multi-Species Conservation Strategy Goals

- R Recover. Recover species’ populations within the MSCS focus area to levels that ensure the species’ long-term survival in nature.
- r Contribute to recovery. Implement some of the actions deemed necessary to recover species’ populations within the MSCS focus area.
- m Maintain. Ensure that any adverse effects on the species that could be associated with implementation of CALFED actions will be fully offset through implementation of actions beneficial to the species (CALFED Bay–Delta Program 2000).

California beaked-rush (*Rhynchospora californica*), Sanford's sagittaria (*Sagittaria sandfordii*), and Columbian watermeal (*Wolffia brasiliensis*)—have moderate to low potential to occur in freshwater marsh or riparian habitat adjacent to the eastern, southern, and western edges of the project area. However, the extent and quality of freshwater marsh habitat directly adjacent to the project area is low and limits the potential for the plants' occurrence.

Fox Sedge

Fox sedge (*Carex vulpinoidea*) is a perennial herb in the sedge family (Cyperaceae). It is a CNPS List 2 species. This species produces small, inconspicuous flowers from May to June. Suitable habitat consists of riparian woodland and freshwater marshes and swamps. Fox sedge has been reported not far from the project area, east of the Sacramento River, just north of Golden State Island and between lower Foster Island and the southern end of Dicus Slough (CNDDDB 2007).

Silky Cryptantha

Silky cryptantha (*Cryptantha crinita*) is an annual herb in the Borage family (Boraginaceae). It is a CNPS List 1B species, and produces small, inconspicuous white flowers from April to May. The plant is found on gravelly streambeds within lower montane coniferous forest, cismontane woodland, riparian scrub, riparian woodland, and valley and foothill grassland habitats.

Four-angled Spikerush

Four-angled spikerush (*Eleocharis quadrangulata*) is also a CNPS List 2 species and member of the sedge family. As its common name suggests, the stem of this perennial herb is strongly four-sided. It blooms from May to September and grows in freshwater marshes and swamps as well as along pond and lake margins.

Rose-mallow

Rose-mallow (*Hibiscus lasiocarpus*) is an emergent perennial herb in the mallow family (Malvaceae) that produces large white or pink flowers. This CNPS List 2 species blooms from June to September and grows in freshwater marshes and swamps. Rose-mallow has been reported to occur in an oxbow north of Golden State Island and east of the Sacramento River, within the area covered by the Park Plan (CNDDDB 2007).

California Beaked Rush

California beaked rush (*Rhynchospora californica*), a member of the Rush family (Juncaceae), is a CNPS List 1B plant. It is a medium sized clumping rush with clustered heads of reddish-brownish lowers subtended by a distinctive awn-like bract. California beaked rush can be found in bogs, fens, freshwater marshes and swamps.

Sanford's Sagittaria

Sanford's sagittaria (*Sagittaria sandfordii*) is a CNPS List 1B species in the water-plantain family (Alismataceae). This emergent perennial herb produces white flowers from May to October. Unlike other sagittaria species, it does not have arrow-shaped leaves. Suitable habitat typically consists of shallow, standing fresh water associated with marshes and swamps. Sanford's sagittaria can also occur within slow-moving water bodies such as ponds, lakes, sloughs, ditches, canals, streams, and rivers.

Columbian Watermeal

Columbian watermeal (*Wolffia brasiliensis*) is a CNPS List 2 species in the duckweed family (Lemnaceae). It is a perennial aquatic herb that produces inconspicuous flowers from April to December. Columbian watermeal produces a transparent green, spheric plant body that is less than 1.5 mm. This species grows in colonies on the

water surface within shallow freshwater marshes. Columbian watermeal has been reported within the BSRSP, in the sloughs near Chico Landing (CNDDDB 2007).

Special-status Wildlife

Table 4.4-3 provides information on special-status wildlife species with potential to occur on or adjacent to the project site, including the species' regulatory status, habitat requirements, CALFED MSCS conservation goals, and an assessment of their potential for occurrence. As described above, existing habitat within the project site is limited to walnut and almond orchards, and does not provide suitable nesting habitat for any of the special-status wildlife described. Eleven special-status wildlife species have potential to nest in suitable habitats adjacent to the project site. An additional nine special-status species have potential to forage adjacent to the project site. Four of these species may also forage occasionally in the project site orchards, but are more strongly associated with riparian forest habitats.

Table 4.4-3 Special-status Wildlife with Potential to Occur In or Adjacent to the Project Area					
Species	Status ¹			Habitat	Potential for Occurrence ²
	Federal	State	MSCS Goals ³		
Invertebrates					
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	—	R	Elderberry shrubs, typically in riparian habitats	Could occur; elderberry shrubs present in riparian habitats adjacent to the project area.
Reptiles					
Giant garter snake <i>Thamnophis gigas</i>	T	T	r	Slow-moving streams, sloughs, ponds, marshes, inundated floodplains, rice fields, and irrigation and drainage ditches	Unlikely to occur; Mud Creek adjacent to the project site offers potentially suitable habitat; however, giant garter snakes have not been recorded between the levees of the Sacramento River floodplain and uplands on the project site are unsuitable due to ongoing agricultural cultivation.
Northwestern pond turtle <i>Actinemys marmorata marmorata</i>	—	SSC	m	Ponds, marshes, rivers, streams, sloughs	Known to occur; suitable aquatic habitat in Mud Creek adjacent to the project site.
Birds					
American white pelican <i>Pelecanus erythrorhynchos</i>	—	SSC	—	Marshes, rivers, and other aquatic habitats	Known to occur; suitable foraging habitat in Sacramento River adjacent to the project site; however, sites not within species breeding range.
Double-crested cormorant <i>Phalacrocorax auritus</i>	—	SSC	m	Isolated islets or tall lakeside trees near fish-bearing waters	Known to occur; suitable foraging habitat in Sacramento River adjacent to the project site; however, no nesting colonies are expected to occur nearby.
Osprey <i>Pandion haliaetus</i>	—	SSC	m	Coastal habitats, freshwater lakes and reservoirs, and large rivers	Known to occur; suitable foraging habitat in Sacramento River adjacent to the project site; could nest in large trees adjacent to project site.

**Table 4.4-3
Special-status Wildlife with Potential to Occur In or Adjacent to the Project Area**

Species	Status ¹			Habitat	Potential for Occurrence ²
	Federal	State	MSCS Goals ³		
Southern bald eagle <i>Haliaeetus leucocephalus leucocephalus</i>	—	E, FP	m	Large rivers, freshwater lakes and reservoirs, and marshes	Known to occur; suitable foraging habitat in Sacramento River adjacent to the project site; however, sites not within species breeding range.
White-tailed kite <i>Elanus leucurus</i>	—	FP	m	Forage in grasslands and agricultural fields; nest in isolated trees or small woodland patches	Known to occur; suitable foraging habitat in row crop fields adjacent to project site; suitable nesting habitat in adjacent riparian forest.
Northern harrier <i>Circus cyaneus</i>	—	SSC	m	Forage and nest in grasslands, agricultural fields, and marshes	Known to occur; suitable foraging habitat in marsh and row crop fields adjacent to project site; however, unlikely to nest on or adjacent to project site.
Cooper's hawk <i>Accipiter cooperii</i>	—	SSC	m	Forage and nest in open woodlands and woodland margins	Known to occur; suitable foraging and nesting habitat in riparian forest adjacent to project site.
Sharp-shinned hawk <i>Accipiter striatus</i>	—	SSC	—	Forage and nest in open woodlands and woodland margins	Known to occur; suitable foraging habitat in riparian forest adjacent to project site; however, sites not within species breeding range.
Swainson's hawk <i>Buteo swainsoni</i>	—	T	R	Forage in grasslands and agricultural fields; nest in open woodland or scattered trees	Known to occur; suitable foraging habitat in row crop fields adjacent to project site; suitable nesting habitat in adjacent riparian forest.
Burrowing owl <i>Athene cunicularia</i>	—	SSC	—	Grasslands and agricultural fields, especially where ground squirrel burrows are present	Unlikely to occur; suitable foraging and nesting habitat in row crop fields adjacent to project site; however, has not been documented on or adjacent to the project site, and ground squirrel colonies are not present.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	C	E	R	Riparian forest, typically with mature cottonwoods and willows	Known to occur; suitable foraging and nesting habitat in riparian forest adjacent to project site; nesting has been documented by CNDDDB directly across the Sacramento River from project site.
Bank swallow <i>Riparia riparia</i>	—	T	R	Forage in various habitats; nests in banks or bluffs, typically adjacent to water	Known to occur; suitable aerial foraging habitat present throughout the project area; nesting colonies documented by CNDDDB across Sacramento River from project site.

**Table 4.4-3
Special-status Wildlife with Potential to Occur In or Adjacent to the Project Area**

Species	Status ¹			Habitat	Potential for Occurrence ²
	Federal	State	MSCS Goals ³		
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	—	E	—	Riparian woodland and scrub; typically nests in willow and alder patches	Known to occur; suitable foraging habitat in riparian forest and scrub adjacent to project site; however, not within species breeding range.
Loggerhead shrike <i>Lanius ludovicianus</i>	—	SSC	—	Forage in grasslands, and agricultural fields; nest in scattered shrubs and trees	Known to occur; suitable foraging habitat provided by row crop fields adjacent to project site; nesting habitat provided by adjacent riparian habitat.
Yellow warbler <i>Dendroica petechia</i>	—	SSC	—	Riparian woodland and scrub	Known to occur; suitable foraging and nesting habitat in riparian forest adjacent to project site; nesting has been documented nearby at Capay.
Yellow-breasted chat <i>Icteria virens</i>	—	SSC	m	Riparian woodland and scrub, with dense shrub cover	Known to occur; suitable foraging and nesting habitat in riparian forest adjacent to project site; nesting has been documented nearby at Capay.

Mammals

Ringtail <i>Bassariscus astutus</i>	—	FP	—	Riparian forest and shrubland	Could occur; suitable foraging and nesting habitat in riparian forest adjacent to project site.
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¹ **Legal Status Definitions**

<u>Federal</u>		<u>State</u>	
E	Endangered	E	Endangered
T	Threatened	T	Threatened
C	Candidate for Listing	FP	Fully Protected
		SSC	Species of Special Concern

² **Potential for Occurrence Definitions**

Unlikely to occur: Habitat on or adjacent to the project site is generally suitable; however, the species is not known to occur in the vicinity and is not expected to occur due to one or more important habitat factors.

Could occur: Suitable habitat is available on or adjacent to the project site; however, the species has not been documented on or adjacent to the project site.

Known to occur: The species was reported in a TNC Site Assessment as having been observed within 5 miles of the project site and within the Sacramento River levees (Hubbell et al. 2003a and 2003b).

³ **Multi-Species Conservation Strategy Goals**

- R Recovery. Recover species' populations within the MSCS focus area to levels that ensure the species' long-term survival in nature.
- r Contribute to recovery. Implement some of the actions deemed necessary to recover species' populations within the MSCS focus area.
- m Maintain. Ensure that any adverse effects on the species that could be associated with implementation of CALFED actions will be fully offset through implementation of actions beneficial to the species (CALFED Bay-Delta Program 2000).

Special-status Invertebrates

Valley elderberry longhorn beetles require elderberry shrubs for reproduction and survival, spending most of their life cycle as larvae within the stems. The larval stage may last 2 years, after which the larvae enter the pupal stage and transform into adults. Adults are active (feeding and mating) from March to June (USFWS 1984). Valley elderberry longhorn beetles are patchily distributed throughout riparian forests of the Central Valley, although they appear to be only locally common (i.e., found in population clusters that are not evenly distributed across the Central Valley) (USFWS 1984). Elderberry shrubs are likely to occur in riparian habitats adjacent to the project site; therefore, valley elderberry longhorn beetles could also occur in these locations.

During site reconnaissance surveys conducted by EDAW in September 2007, no elderberry shrubs were observed on the project site. However, the riparian habitats adjacent to the project site have potential to support elderberry shrubs, and elderberry shrubs with stems measuring 1.0 inch or greater in diameter when measured at ground level have the potential to harbor valley elderberry longhorn beetle larvae (USFWS 1999a). Elderberry is a fast-growing species, and seedlings may reach 1-inch diameters in as little as 1–2 years under ideal conditions, or more commonly after 2–3 years (Holyoak and Talley, pers. comm., 2007). Elderberry shrubs may thus become established in the project site' adjacent riparian habitat between the time of EDAW's September 2007 reconnaissance survey and future construction of the proposed project, if approved.

The U.S. Fish and Wildlife Service (USFWS) has recently proposed to delist valley elderberry longhorn beetles from their current protected status under the ESA, due in part to the success of past riparian habitat restoration projects (USFWS 2006). The final ruling of whether or not to delist this species will take place after substantial data review, public comment, and potential litigation, and will likely take more than a year to complete.

Special-status Reptiles

Giant garter snakes inhabit a variety of aquatic habitats, such as marshes, sloughs, ponds, flooded rice fields, irrigation canals and drainage ditches, and inundated floodplains. They are typically absent from large or swift-moving rivers, heavily wooded riparian habitats, and from wetlands with sand, gravel, or rock substrates (USFWS 1999a). These snakes also require adjacent upland habitat for basking and burrows that provide sufficient cover and are at high enough elevations to function as refuges from flood waters during the snakes' inactive season (October–May). The project site is within the geographic range of this species. Although the majority of giant garter snakes occur much farther south in the Sacramento Valley, rare occurrences of this species have been documented in the vicinity of Chico, both in the 1970s (USFWS 1999b) and recently at the oxidation ponds adjacent to the Chico Wastewater Treatment Plant (Fitzgerald, pers. comm., 2005). The project site is within approximately 5 miles of these ponds, and home ranges of individual giant garter snakes have been recorded up to 3 square miles in size (Wylie and Casazza 2000). In a single day, individual giant garter snakes have been recorded traveling over one mile, and may move as much as two miles in a day (Hansen and Brode 1993). Although the Sacramento River, riparian forest habitats, orchards, and row crop fields adjacent to the project site does not provide suitable habitat for giant garter snakes, Mud Creek could offer suitable habitat for this species. However, giant garter snakes are unlikely to occur in any habitat between the flood control levees of the Sacramento River, due to the high flows in winter (Hansen, pers. comm., 2006). Because they depend on year-round habitat suitability, these snakes generally do not occupy otherwise suitable habitat that is located within flood control levees, even during their summer active season when flows are lower. This trend has been observed throughout the Central Valley (Hansen, pers. comm., 2006). In addition, giant garter snakes are unlikely to occur on the project site, because it is actively cultivated and does not provide suitable upland habitat.

Northwestern pond turtles generally occur in streams, ponds, freshwater marshes, and lakes. They require still or slow moving water with emergent woody debris, rocks, or other similar features for basking sites. Nests are typically located on unshaded upland slopes in dry substrates with clay or silt soils. Northwestern pond turtles could occur in the slow-moving aquatic habitat of Mud Creek, adjacent to the project site. They are unlikely to occur in the Sacramento River, which is generally fast-moving and unlikely to provide suitable habitat. Upland

habitats on and adjacent to the project site are unlikely to be suitable for nesting, because of the long agricultural history of ground disturbance in the orchard and row crop sites, and the heavy shade of the riparian forest.

Special-status Birds

Aquatic habitats adjacent to the project site provide suitable foraging habitat for American white pelicans and double-crested cormorants. Double-crested cormorants also have limited potential to nest in trees and snags in less disturbed locations along the Sacramento River and adjacent areas, though no known nesting colonies are present. The project site is not within the known breeding range of the American white pelican.

Osprey and southern bald eagles nest along the shores of large rivers and lakes and prey primarily on fish in such water bodies. Osprey are known to nest at BSRSP (Elliott, pers. comm., 2002) and directly across the Sacramento River from the project site, adjacent to the Sacramento River National Wildlife Refuge's Capay Unit (Gilchrist et al. 2002). Bald eagles do not nest in the Central Valley, but wintering, migrating, and non-breeding individuals are known to occur along the Sacramento River and could forage and roost adjacent to the project site.

Swainson's hawks and white-tailed kites typically nest in scattered riparian or woodland trees adjacent to grasslands and/or row crop fields that provide suitable foraging habitat. Swainson's hawks are known to nest at BSRSP, and have been recorded one mile south of the project site (Exhibit 4.4-2) (CNDDDB 2007). The riparian forest adjacent to the project site provides potential nesting habitat for both Swainson's hawks and white-tailed kites, and the row crop fields adjacent to the project site provide suitable foraging habitat for both species.

Northern harriers and burrowing owls nest and forage in grasslands and row crop fields; northern harriers also nest and forage in marsh habitats. Both species have potential to occur in the row crop fields adjacent to the project site. Burrowing owl, however, is unlikely to occur because this species has not been documented during the several years of bird surveys conducted in the vicinity, and because of the area's extensive agricultural pest control activities which have precluded the establishment of ground squirrel colonies on or adjacent to the project site. It is considered very unlikely that burrowing owl will occur in the project vicinity (Joe Silveira, pers. comm., 2005).

Cooper's hawks and sharp-shinned hawks nest and forage primarily in riparian forest habitats. Cooper's hawks have potential to nest and forage in such habitats adjacent to the project site. Sharp-shinned hawks are not known to nest in the Central Valley, but wintering, migrating, and non-breeding individuals are known to occur along the Sacramento River and could forage and roost adjacent to the project site.

Yellow-billed cuckoos require large blocks (greater than 40 hectares) of riparian forest vegetation for nesting (Laymon et al. 1997). Historically, this species was common and widespread in river bottom riparian habitat throughout California, but numbers have declined dramatically as a result of habitat loss. Cuckoos have recently been documented nesting at Phelan Island, less than two miles south of the project site (Small et al. 2000), and they were detected at BSRSP, within one mile of the project site, in 1998 (Manolis 1998) and 2002 (Gilchrist et al. 2002). Nests have also been recorded in riparian forest habitats directly across the river from the project site, less than two miles north of the project site, and less than one mile south of the project site (Exhibit 4.4-2) (CNDDDB 2007). Western yellow-billed cuckoos are not currently known to nest in the riparian habitat directly adjacent to the project site, although there is potential for them to do so.

Bank swallows nest colonially in vertical banks and cliffs with fine-textured sandy soils and tend to return to these colonial nests year after year. Foraging occurs primarily over open riparian areas, but also over grassland, shrubland, and savannah habitats during the breeding season. Historically, bank swallows nested on coastal bluffs in southern California and in riverbanks throughout the Central Valley and northern California, but the current nesting population is concentrated on the banks of Central Valley rivers. Approximately 75% of the current breeding population occurs along banks of the Sacramento and Feather rivers (City of Sacramento et al. 2003). Nesting colonies are present in the Sacramento River bank across from the project site (Exhibit 4.4-2) (CNDDDB 2007).

Willow flycatchers have been eliminated from much of their former range in California, and breeding populations in northern California are now primarily restricted to montane meadows in the Sierra Nevada. This species nests in shrubby riparian vegetation, typically in areas with at least some surface water (Bombay et al. 2000). Willow flycatchers are likely to occur in riparian habitat adjacent to the project site during migration, but they are not expected to nest there.

Loggerhead shrike, yellow warbler, and yellow-breasted chat are known to occur in the vicinity of the project site. Loggerhead shrikes occur in open areas and use scattered shrubs and trees for nesting. They are likely to nest and forage in open habitats near the project site, and may also nest along the ecotone between the riparian forest and row crop fields adjacent to the project site (Gilchrist et al. 2002). Yellow warblers typically nest in willow thickets, and yellow-breasted chats typically nest in riparian habitats with a dense shrub layer. Yellow warblers are relatively uncommon breeders in the Central Valley, but a breeding territory has been documented at BSRSP (Manolis 1998), and a breeding pair was recorded nesting in riparian habitat across the Sacramento River from the project site in 1999, adjacent to the Sacramento River National Wildlife Refuge's Capay Unit (TNC 1999). Yellow-breasted chats are also known to breed in riparian habitat adjacent to the Capay Unit and are likely to nest in such habitats adjacent to the project site (Gilchrist et al. 2002).

Special-status Mammals

Ringtails occur in mixed riparian and other forest and shrubby habitats, in close association with permanent water and rocky areas. They nest in rock crevices, hollow trees, logs, snags, abandoned burrows, or woodrat nests, with young typically born in May and June (DFG 1983). The riparian forest adjacent to the project site provides suitable habitat for ringtails. Undocumented occurrences of ringtails have been noted emerging from nest trees in the oak woodland near the current office complex and service yard of the BSRSP at the Indian Fishery Unit, adjacent to the Nicolaus parcel.

Special-status Fish

Table 4.4-4 provides information on special-status fish species known to occur in the Sacramento River, including the species' regulatory status and habitat description. A total of seven special-status fish species are known to occur adjacent to the project area during at least a portion of their life cycles. In some cases, it is an evolutionarily significant unit (ESU) of a fish species, rather than the entire population, that is listed as special-status. (An ESU is a distinctive group of Pacific salmon. ESU is further described below.) Special-status fish species occurring in the vicinity of the proposed project include Central Valley fall-/late-fall-run chinook salmon, Sacramento River winter run chinook salmon, Central Valley spring run chinook salmon, steelhead, green sturgeon, Sacramento splittail, and hardhead. Most of these species are anadromous and spend various life stages in the project area. These species may only be present near the project site during certain times of year, described in the text following Table 4.4-4. The only exceptions are splittail and hardhead, which are resident species. Table 4.4-4 also identifies goals for certain species evaluated as part of the CALFED MSCS.

Chinook Salmon

Four runs of chinook salmon occur in the Sacramento River, including fall-, late fall-, winter-, and spring-run. The distribution and abundance of each run is limited by the availability of suitable habitat during their respective spawning seasons. Chinook salmon use this portion of the Sacramento River as a migratory pathway for adults and as rearing habitat for emigrating juveniles. Fall-run chinook salmon is the most abundant ESU, documented to comprise about 80% of the Sacramento Basin stock in the early 1980s (Kjelson et al. 1982). Under ESA, an ESU is considered a population (or group of populations) that is reproductively isolated from other populations of the same species and that contributes substantially to the ecological/genetic diversity of the species (Waples 1991). Different runs of the same salmon species are often considered separate ESUs because the populations are reproductively isolated due to different spawning times. The portion of the Sacramento River adjacent to the project site (along with other areas) is designated as critical habitat for winter-run and spring-run chinook salmon.

Critical habitat includes the river water, river bottom, and adjacent riparian zone (i.e., those adjacent terrestrial areas that directly affect a freshwater aquatic ecosystem).

Table 4.4-4 Special-status Fish with Potential to Occur Adjacent to the Project Area				
Species	Status ¹			Habitat
	Federal	State	MSCS Goals ²	
Chinook salmon – Sacramento River winter-run <i>Oncorhynchus tshawytscha</i>	E	E	R	Rivers and streams, including the Sacramento River.
Chinook salmon - Central Valley spring-run <i>Oncorhynchus tshawytscha</i>	T	T	R	Rivers and streams, including the Sacramento River.
Chinook salmon - Central Valley fall-/late fall-run <i>Oncorhynchus tshawytscha</i>	—	SSC	R	Rivers and streams, including the Sacramento River.
Central Valley steelhead <i>Oncorhynchus mykiss</i>	T	—	R	Rivers and streams, including the Sacramento River.
Green sturgeon <i>Acipenser medirostris</i>	T	—	R	Bay-Delta and associated large rivers, including the Sacramento River.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	—	SSC	R	Bay-Delta and associated rivers and streams, including the Sacramento River.
Hardhead <i>Mylopharodon conocephalus</i>	—	SSC	m	Rivers and streams, including the Sacramento River.
¹Legal Status Definitions				
<u>Federal</u>		<u>State</u>		
E	Endangered	E	Endangered	
T	Threatened	T	Threatened	
C	Candidate for listing	SSC	Species of Special Concern	
²Multi-Species Conservation Strategy Goals				
R	Recovery. Recover species' populations within the MSCS focus area to levels that ensure the species' long-term survival in nature.			
r	Contribute to recovery. Implement some of the actions deemed necessary to recover species' populations within the MSCS focus area.			
m	Maintain. Ensure that any adverse effects on the species that could be associated with implementation of CALFED actions will be fully offset through implementation of actions beneficial to the species (CALFED Bay-Delta Program 2000).			

All chinook salmon require cold, freshwater streams with suitable gravel for reproduction. Females deposit their eggs in nests, or “redds,” which they excavate in the gravel bottom in areas of relatively swift water (Moyle 2002). For maximum survival of incubating eggs and larvae, water temperatures must be between 39°F and 57°F. After emerging, chinook salmon fry tend to seek shallow, nearshore habitat with slow water velocities and move to progressively deeper, faster water as they grow (DFG 1998). Freshwater rearing habitat extends from upstream spawning reaches to the Bay-Delta and Suisun Bay (USFWS 1997). Juveniles typically rear in fresh water for up to 5 months before migrating to sea, although spring-run juveniles frequently reside in freshwater habitat for 12–16 months. Chinook salmon spend 2–4 years maturing in the ocean before returning to their natal streams to spawn. All adult chinook salmon die after spawning.

Winter-run chinook salmon typically migrate by the project area from December through July as adults, and from November through May as emigrating juveniles. Adult spring-run generally migrate by the project area from March to September, while juveniles and yearlings emigrate downstream from March to June and November to April, respectively. Adult fall-run chinook salmon enter the Sacramento River system from July through

December and spawn from October through December. Late fall-run chinook salmon enter the river from October to April and spawn from January to April (Vogel and Marine 1992).

Since 1981, USFWS personnel have captured juvenile chinook salmon using beach seines at 13 sampling sites between RM 298 (Redding) and RM 164 (Princeton), including a RM 193 site. USFWS data provides information on presence/absence, timing of migration, and size of juvenile chinook salmon runs. The four different runs of chinook salmon exhibit different rearing strategies that are partially explained by the availability of food, river flows, and water temperatures in the upper and lower river and Bay-Delta area. Generally, fall and spring-run chinook salmon move out of the upper river 1–2 months after emergence, and are hypothesized to rear in the lower river or in the Bay-Delta. A portion of the winter-run chinook salmon migrate out of the upper river soon after emergence; however, the majority appear to rear in the upper river and tributaries (Maslin et al. 1997 and 1998). Late-fall-run chinook salmon tend to reside 4–6 months in the upper river before moving out of the system (USFWS 1992).

Juvenile chinook salmon captured at RM 193 during 1990–1999 follow the above patterns, and their presence at this location suggests they were likely migrating down the river, so occurrences here were temporary and indicate timing of outmigration. Fall-run chinook salmon were the most abundant run captured at RM 193, and occurred in greater numbers during March, which corresponded to a time of high streamflows. Winter-run outmigration peaked during November, a likely response to increasing streamflows due to winter rains. Late-fall run outmigration was bimodal with some moving out as fry in May and the majority as smolts in October. Spring-run outmigration occurred soon after emergence and was also bimodal corresponding to peak streamflows during the winter (rain events) and spring (snowmelt) (USFWS 1992).

Steelhead

Steelhead use the portion of the Sacramento River adjacent to the project site (along with other areas) as a migratory pathway for adults and as rearing habitat for emigrating juveniles. Historical records indicate that adult steelhead enter the mainstem Sacramento River in July, reach peak abundance in the fall, and continue migrating through February or March (McEwan and Jackson 1996). Juveniles emigrate downstream to the ocean beginning in November and continuing through May (Schaffter 1980), although most Sacramento River steelhead emigrate in spring and early summer. Sacramento River steelhead generally migrate as 1-year-olds (Barnhart 1986, Reynolds et al. 1993). The portion of the Sacramento River adjacent to the project site is designated critical habitat for Central Valley steelhead.

Green Sturgeon

Green sturgeon has recently has been listed as threatened by NMFS (71 FR 17757). Green sturgeon occur in the lower reaches of large rivers, including the Sacramento–San Joaquin River basin, and in the Eel, Mad, Klamath, and Smith rivers (Moyle et al. 1992). Green sturgeon adults and juveniles occur throughout the upper Sacramento River, based upon observations incidental to winter-run Chinook monitoring at the Red Bluff Diversion Dam in Tehama County (Brown 2006). Green sturgeon spawn predominantly in the upper Sacramento River. They are thought to spawn every 3–5 years. Their spawning period is March to July, with a peak in mid-April to mid-June (Moyle et al. 1992). Juveniles inhabit the estuary until they are approximately 4–6 years old, when they migrate to the ocean (Kohlhorst et al. 1991). Juvenile fish have been collected in the vicinity of the project area, near Hamilton City.

Sacramento Splittail

Sacramento splittail were historically widely distributed throughout much of the Central Valley, but dams and diversions have prevented them from reaching many upstream reaches, and the current population is concentrated in the Bay-Delta region. Recent data indicate that splittail occur in the Sacramento River as far upstream as the Red Bluff Diversion Dam (RM 240) (Sommer et al. 1997, Maslin et al. 1997), and that some adults spend the summer in the mainstem Sacramento River rather than return to the estuary (Baxter 1999). Several adults were

observed in Mud Creek and Kusal Slough in 1996 and 1997 (Maslin et al. 1997). The distribution and extent of spawning and rearing along the mainstem Sacramento River is unknown. Splittail spawn over flooded terrestrial or aquatic vegetation (Moyle 2002, Wang 1986) in early March and May in the lower reaches of the Sacramento River (Moyle et al. 1989). Spawning has been observed as early as January and continues through July (Wang 1986). Larval splittail are commonly found in the shallow, vegetated areas where spawning occurs. Larvae eventually move into deeper open water habitats as they grow and become juveniles. Riparian vegetation in the project area that is prone to sustained flooding provides potential splittail spawning and rearing habitat.

Hardhead

Hardhead are widely distributed throughout the low- to mid-elevation streams in the main Sacramento–San Joaquin drainage as well as in the Russian River drainage. Hardhead prefer the undisturbed portions of larger streams at low to middle elevations. They are able to withstand summer water temperatures above 68°F; however hardhead will select lower temperatures when they are available. They are fairly intolerant of low-oxygenated waters, particularly at higher water temperatures. Pools with sand-gravel substrates and slow water velocities are the preferred habitat; adult fish inhabit the lower half of the water column, while the juvenile fish remain in the shallow water closer to the stream edges. Hardhead typically feed on small invertebrates and aquatic plants at the bottom of quiet water (Moyle 2002).

SENSITIVE HABITATS

Sensitive habitats include those that are of special concern to resource agencies or that are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, or Section 404 of the federal CWA as discussed further in Section 4.4.2, “Regulatory Setting.” Sensitive habitats are of special concern because they are of high value to plants, wildlife, and fish species and have high potential to support special-status species. Sensitive habitats also provide other important ecological functions, such as enhancing flood and erosion control and maintaining water quality.

There are no sensitive habitats within the project site. A variety of sensitive habitats, including Great Valley willow scrub, Great Valley cottonwood riparian forest, freshwater marsh, and wetlands are present adjacent to the project site. These habitats are protected under the Fish and Game Code and/or federal CWA.

4.4.2 REGULATORY SETTING

Important regulations that protect biological resources and could be applicable to the proposed project are discussed below.

FEDERAL REGULATIONS

Federal Endangered Species Act

The USFWS and the National Marine Fisheries Service (NMFS) have authority over projects that may affect the continued existence of a federally-listed (threatened or endangered) species. Section 9 of ESA prohibits the take of federally-listed species; take is defined under ESA, in part, as killing, harming, or harassment. Under federal regulations, take is further defined to include habitat modification or degradation where it actually results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

Section 7 of ESA outlines procedures for federal interagency cooperation to conserve federally-listed species and designated critical habitat. Section 7(a)(2) requires federal agencies to consult with USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species. For projects where federal action is not involved and take of a listed species may occur, the project

proponent may seek to obtain incidental take under Section 10(a) of ESA. Section 10(a) of ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a Habitat Conservation Plan (HCP) that includes components to minimize and mitigate impacts associated with the take.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for international migratory bird protection and authorizes the Secretary of the Interior to regulate the taking of migratory birds. MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird. The list of species protected by MBTA has recently been updated by USFWS; the current list can be found in the August 24, 2006 Federal Register (71 FR 50194). The list includes nearly all birds native to the United States. Loss of nonnative species, such as house sparrows, European starlings, and rock pigeons, are not covered by this statute.

Clean Water Act

Pursuant to Section 404 of the CWA, the USACE regulates discharge of dredge or fill material into waters of the United States. Waters of the United States and their lateral limits are defined in 33 CFR Part 328.3 (a) and include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Fill is defined as any material that replaces any portion of a water of the United States with dry land or changes the bottom elevation of any portion of a water of the United States. Any activity resulting in the placement of dredge or fill material to waters of the United States requires a permit from the USACE. Pursuant to Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredge or fill material must obtain water quality certification from the Regional Board (formerly called RWQCB) indicating that the project would uphold state water quality standards.

Magnuson-Stevens Fishery Conservation and Management Act

The amended Magnuson-Stevens Fishery Conservation and Management Act, also known as the Sustainable Fisheries Act, requires all federal agencies to consult with the Secretary of Commerce on activities or proposed activities authorized, funded, or undertaken that may adversely affect Essential Fish Habitat (EFH) of commercially managed marine and anadromous fish species (Office of Habitat Conservation 1999). The EFH provisions of the Sustainable Fisheries Act are designed to protect fishery habitat from being lost due to disturbance and degradation. The act requires that EFH must be identified for all species federally managed under the Pacific Fisheries Management Council (PFMC). PFMC is responsible for managing commercial fisheries resources along the coasts of Washington, Oregon, and California. Managed species are covered under three fisheries management plans: Pacific Groundfish Fishery Management Plan, Coastal Pelagic Fishery Management Plan, and Pacific Salmon Fishery Management Plan.

STATE REGULATIONS

California Endangered Species Act

Pursuant to the CESA and Section 2081 of the Fish and Game Code, a permit from DFG is required for projects that could result in the take of a state-listed Threatened or Endangered species. Under CESA, the definition of “take” is understood to apply to an activity that would directly or indirectly kill an individual of a species, but the definition does not include “harm” or “harass,” as the federal act does. As a result, the threshold for a take under the CESA is typically higher than that under the ESA. Take may be authorized by DFG as long as it is incidental to an otherwise lawful activity and the impacts of authorized take must be minimized and fully mitigated.

California Fish and Game Code Section 2800 et seq. – Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) Act of 1991 was established by the California legislature, is directed by DFG, and is being implemented by the state, and public and private partnerships to protect habitat in California. The DFG NCCP program is the mechanism for implementation of the NCCP Act. As opposed to the single species interpretation of the ESA, this act aims at protecting many species using a regional approach to habitat preservation. NCCPs describe conservation programs designed to minimize and mitigate effects to specified biological resources. The program takes a broad-based ecosystem approach to conservation planning. Its primary objective is to conserve natural communities at the ecosystem scale while accommodating compatible land uses. An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, including species protected under CESA, while allowing compatible and appropriate economic activity.

California Fish and Game Code Sections 3503 and 3513 – Protection of Birds

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., eagles, hawks, owls, and falcons), including their nests or eggs. Section 3513 of the California Fish and Game Code provides for adoption of MBTA's provisions. It states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird. These state codes offer no statutory or regulatory mechanism for obtaining an incidental take permit for the loss of nongame, migratory birds. Typical violations include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Sections 3503.5 and 3513 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction.

Fully Protected Species under the Fish and Game Code

Protection of fully protected species is described in four sections of the Fish and Game Code that list 37 fully protected species (Fish and Game Code Sections 3511, 4700, 5050, and 5515). These statutes prohibit take or possession at any time of fully protected species. DFG is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species. DFG has informed non-federal agencies and private parties that they must avoid take of any fully protected species when carrying out projects.

California Fish and Game Code Section 1602 – Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream or lake in California that supports wildlife resources are subject to regulation by DFG, pursuant to Section 1602 of the California Fish and Game Code. Section 1602 states that it is unlawful for any person, governmental agency, state, local, or any public utility to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake without first notifying DFG of such activity. The regulatory definition of stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports wildlife, fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or have supported riparian vegetation. DFG's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, "waters of the state" fall under the jurisdiction of the Regional Water Quality Control Board (RWQCB). Under the act, the Regional Board must prepare and periodically update its Basin Plan. Each Basin Plan sets forth water quality standards for surface water and

groundwater, as well as actions to control non-point and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the Regional Board, which may be issued in addition to a water quality certification or waiver under Section 401 of the CWA.

BUTTE COUNTY GENERAL PLAN

The Conservation element of the Butte County General Plan (approved in 1971) provides the following guidance regarding wildlife and fisheries resources, which are applicable to the proposed project.

Wildlife

Acknowledgment by game management officials of deterioration of existing wildlife habitat by intrusion of urban development, with the possibility of certain species becoming endangered to the point of extinction, should also be a consideration of land use.

The migratory routes of wildlife which have been established by the basic survival requirements of the individual species should be recognized as an integral part of the ecosystem.

Riparian lands which support streamside vegetation become extremely important inasmuch as the food and cover these lands provide are necessary for a great variety of wildlife (i.e., pheasants, quail, doves, songbirds and a large number of fur-bearing mammals). This particular type of habitat, by the very nature of its aesthetics, is in great demand for development and in many areas has been totally eliminated by intensive land use. Two of these remaining areas of "premium riparian habitat" in the State of California are located in Butte County, one on the Sacramento River from Keswick to the Delta, which includes Butte County, and the other the Feather River from Oroville south to the Sutter and Yuba County lines. These areas should be very carefully controlled to protect this environment if the wildlife that depends on this particular habitat is to continue to survive.

Fisheries

Within the Protected Waterways Plan (Initial Element), a report was prepared by a study staff assembled from the five departments in The Resources Agency: Fish and Game, Parks and Recreation, Water Resources, Navigation and Ocean Development, and Conservation (Division of Forestry) in which Chapter II is directed to Section 3 of the Protected Waterways Act which requires, among other elements, specific identification of waterways for "extraordinary value."

Butte County possesses several waterways which have been classified in this report as possessing extraordinary value as fisheries. The classifications are Class I, Premium Waterways; Class II, Very Good Waterways; and Class III, Important Waterways. These fishery classifications include anadromous fish and inland fish. Anadromous fish include King and Silver Salmon, Steelhead Trout, Striped Bass, American Shad, and White and Green Sturgeon, while inland fish include cold-water and warm-water species (i.e., Trout, Bass, Sunfish and Catfish).

The Sacramento and Feather Rivers, Butte Creek and Big Chico Creek received Class I, Premium, for anadromous fish, while Butte Creek, Fall River, French Creek and the Little North Fork of the Middle Fork of the Feather River received Class III, Important, for inland fish (Trout). The Sacramento and Feather Rivers also received classifications for inland fish: the Sacramento, Class I, Premium; the Feather, Class II, Very Good. Lake Oroville received Class I for combination reservoir (inland fish). Inasmuch as the Middle Fork of the Feather River from its source to Lake Oroville has been placed in the National Wild and Scenic Rivers Act, the extraordinary values of this waterway have already been recognized.

The preservation of these already classified extraordinary fisheries and all other waterways depends entirely on all land use, not just the land immediately adjacent to any one development.

Healthy waterways which contain clean cobbles create ideal spawning beds and create the habitat required for aquatic insects that are essential as food for fish. Sedimentation, siltation and turbidity destroy the basic conditions required for spawning beds and aquatic insect production.

Soil erosion occurs naturally, but as man alters the soil, vegetation and runoff, the problems are accelerated. Intensified land use within areas of severe soil erodibility greatly increases the sedimentation conditions in waterways.

OTHER LOCAL REGULATIONS

See Section 3.3.1 of this EIR, "Local and Regional Conservation Planning," for a description of the BSRSP General Plan and EIR, Sacramento River Conservation Area, Sacramento Wildlife Area Management Plan, and USFWS Comprehensive Conservation Plan.

4.4.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

These significance thresholds are based on relevant provisions of CEQA, the State CEQA Guidelines, environmental questions in Appendix G of the Guidelines, and significance criteria used in other relevant environmental compliance documents for similar projects.

The proposed habitat restoration project would be considered to have a significant effect on biological resources if it would:

- ▶ Result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by DFG or USFWS;
- ▶ Result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA;
- ▶ Conflict with any local policies or ordinances protecting biological resources;
- ▶ Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan;
- ▶ Result in the substantial loss or degradation of native vegetation;
- ▶ Result in a substantial net loss of important wildlife habitat, including habitat occurring on agricultural fields;
- ▶ Result in a substantial net loss of important fisheries habitat, or EFH;
- ▶ Result in a construction-related temporary loss of substantial areas of native habitat or a substantial disturbance of sensitive wildlife on or near the project site;
- ▶ Result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by DFG or USFWS;
- ▶ Result in a substantial reduction of the habitat of a fish or wildlife species;
- ▶ Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- ▶ Cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community; or
- ▶ Result in a substantial reduction in the number or restrict the range of an endangered, rare, or threatened plant or animal.

The proposed project would not result in impacts to federally protected wetlands; conflict with any local policies or ordinances protecting biological resources; conflict with an adopted habitat conservation plan; or adversely affect riparian habitat or other sensitive natural communities. Rather, the restoration of the project site would restore riparian habitat and would increase the amount of protected biological resources in the project area. Therefore, no further discussion pertaining to these thresholds of significance is included in this analysis.

4.4.4 IMPACT ANALYSIS

Plants

IMPACT 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. It would not result in the loss or disturbance of native habitats or special-status plant species because these resources are not present in areas that would be disturbed during restoration activities. Restoration of native habitat would, in fact, have a long-term **beneficial** effect to native vegetation and associated plant species.*

Restoration of riparian habitat at the project site would occur on approximately 1506 acres of almond and walnut orchards that has been in continual cultivation for at least 10 years (the age of the youngest cohort of orchards). These lands would be taken out of almond and walnut production and restored to native habitat, including a combination of mixed riparian forest, valley oak forest, cottonwood riparian forest, valley oak savanna, and valley needlegrass grassland (Exhibits 3-7 and 3-8). This restoration could temporarily reduce the local populations of common plant species (ruderal species along the edges of the orchards), but these species are locally and regionally abundant and are not considered sensitive. Sensitive habitats, including Great Valley willow scrub, Great Valley cottonwood riparian forest, and freshwater marsh, are present adjacent to the project area. In addition, six special-status plant species have potential to occur in riparian and freshwater marsh habitats adjacent to the project area. However, none of these habitats would be adversely affected by the proposed restoration project, and the project would result in a long-term increase in the overall amount of sensitive habitat within the project area. Furthermore, the proposed project would support Park Plan Goal ER-1.1 and Guideline ER-1.1-1, which calls for restoration on parcels acquired for habitat values. Therefore, impacts to vegetation, including sensitive habitats and special-status plants, would be **beneficial**.

IMPACT 4.4-b **Introduction and Spread of Invasive Plants (Weeds).** *Implementation of the proposed project would involve initial ground clearing and an eventual reduction in the active management and control of nonnative invasive plants from the present level associated with agricultural activities on the project site. The restoration plans for both the Singh Unit and the Nicolaus property have specific measures for the control of nonnative invasive plant species. Therefore, the potential for project implementation to increase the risk of spreading nonnative invasive plant species into adjacent existing native habitats is low. The potential introduction and spread of nonnative invasive plants would be a **less-than-significant** impact.*

A number of nonnative species tracked by CDFA and Cal-IPC and considered serious problems in native ecosystems and rangelands are present in the existing riparian habitat adjacent to the project site and in the fallow edges and roadsides along the orchards. These include giant reed, yellow-star thistle, Himalayan blackberry, tamarisk, perennial pepperweed, tree-of-heaven, eucalyptus, periwinkle, poison hemlock, edible fig, black locust and wild almond. As part of the ground clearing and replanting that would take place as part of the habitat restoration and establishment of recreation facilities there is potential for these species to colonize the open

ground, establish populations, and become of source of spread and future infestations in neighboring areas where those species did not yet exist. However, the restoration plans for both units have specific maintenance schedules for control of nonnative weed species, consistent with Park Plan Goal ER-1.3 and Guidelines ER-1.3-1 and ER-1.3-2. These plans call for active maintenance for three years following implementation and include control of weeds through herbicide application, mowing, and discing where appropriate (see Appendix C for details). The ultimate objective of the weed control measures is to optimize growth of the planted riparian species past a point where they can compete effectively with the nonnative invasive plant species. With these maintenance measures in place as part of the project description, the impact from introduction and spread of nonnative invasive plants is expected to be *less than significant*.

Wildlife

IMPACT **Potential Effects to Wildlife.** *Implementation of the proposed project would result in an overall **benefit** to wildlife. Approximately 1506 acres would be restored from cultivated orchard to native riparian habitat, which supports a greater diversity and abundance of wildlife, including many special-status species.*

4.4-c

Implementation of the proposed project would result in an overall **benefit** to wildlife. Approximately 1506 acres would be restored from cultivated orchard to native riparian habitat, which supports a greater diversity and abundance of wildlife, including many special-status species. The benefits of riparian restoration have been confirmed by recent research, which has shown substantial population increases for a variety of bird species at riparian restoration sites, with eight species increasing by more than 10% in ten years, and with significantly higher rates of population growth at restored sites than in the Sacramento Valley as a whole or the state of California (Gardali et. al., 2006). In addition, the USFWS proposal to delist valley elderberry longhorn beetles from their current threatened status was due in part to the success of past riparian restoration projects (USFWS 2006), and the first Central Valley nest of endangered least Bell's vireos in over 60 years was recorded in a San Joaquin River restoration site in 2005 (USFWS 2005b).

Restoration of native habitats would eliminate existing orchard habitat which is inhabited by some common wildlife species such as American robin, European starling, gopher snake, western gray squirrel, and black rat. However, most of these species are also likely to use the riparian habitats that would replace the orchards. In addition, orchards and the wildlife they support are locally and regionally common. Therefore, no substantial net loss of wildlife habitat would occur, and the restoration of higher-quality riparian habitat would be considered beneficial.

The proposed project would also enhance existing wildlife movement corridors along the Sacramento River and Mud Creek, by adding 1506 acres of riparian habitat to an existing 2,887 acres of protected and restored habitat along the Sacramento River between river miles 199 and 193, and shortening the distance between riverside habitat parcels. Wildlife movement is not expected to be substantially affected by construction and maintenance of the proposed recreational facilities. Relatively small patches of orchard would be disturbed and/or removed by facility development, and the existing riparian habitat adjacent to the project site would remain undeveloped. Potential project impacts to wildlife corridors would thus be expected to be beneficial.

The proposed expansion of recreational facilities, including parking, campgrounds, picnic/day use areas, and trails is expected to increase visitor use of existing habitats adjacent to the project site and within the Park as a whole. Potential secondary impacts to wildlife that could result from increased visitor use include disturbance from visitor activities (e.g., hiking and camping), introduction/expansion of invasive species, increased populations of native predators (e.g., crows and raccoons) due to the availability of human food waste, and disturbance by domestic dogs. However, such impacts would be minimized by the Park Plan goals and guidelines, which would be followed for both short-term construction and long-term maintenance of the proposed project. These measures include monitoring of special-status species within the Park and development of specific measures to avoid and minimize adverse impacts that could result from facility construction, maintenance activities, and visitor use (Goal ER-1.2 and Guidelines ER-1.2-1 through ER-1.2-5). In addition, the Park Plan includes minimization

measures for the potential impacts of nonnative animals on wildlife in the Park, through monitoring efforts, development and implementation of a control plan, and public education to reduce release and feeding of nonnative animals (Goal EIR-1.4 and Guidelines ER-1.4-1 through ER-1.4-3). Further, all of the new facility development is proposed on existing orchard land which currently provides little habitat value, and the majority of such impacts would be expected to remain within the developed Nicolaus parcel, with a lesser amount of additional use impacts on the adjacent trails and habitats.

The project area and adjacent sensitive habitats are known to support several special-status wildlife species and could support a number of others (Table 4.4-3). Aquatic species, such as giant garter snake and western pond turtle, would not be adversely affected by the proposed project because restoration activities would be restricted to disturbed upland habitats that are unlikely to be utilized by these species. Similarly, ringtail would not be adversely affected because it is restricted to riparian habitat and is unlikely to use the project site while it remains in cultivation. Ringtail would instead benefit from the proposed project's restoration of riparian habitat.

IMPACT 4.4-d **Potential Effects to Valley Elderberry Longhorn Beetles.** *No elderberry shrubs would be directly affected by habitat restoration activities or recreation facilities construction, because these activities would be restricted to areas that have long been subject to high levels of disturbance from agricultural activities and do not support any elderberry shrubs. In addition, the restoration plans do not include planting elderberry shrubs. However, elderberry shrubs that could support valley elderberry longhorn beetle are likely to occur adjacent to the project site. Therefore, focused surveys for elderberry shrubs would be conducted on land within 100 feet of the project site prior to construction. If any elderberry shrubs with 1.0 inch or greater stem diameter are found, USFWS conservation guidelines for valley elderberry longhorn beetles would be followed. Therefore, the proposed project would result in a less than significant impact to valley elderberry longhorn beetles.*

No elderberry shrubs would be directly affected by habitat restoration activities or recreation facilities construction, because these activities would be restricted to areas that have long been subject to high levels of disturbance from agricultural activities and do not support any elderberry shrubs. In addition, the proposed restoration plans do not include planting any elderberry shrubs. This would minimize the potential for recruitment of elderberry shrubs into areas subject to regular maintenance or other disturbances (levees, other flood control structures, and/or adjacent agricultural lands) that could result in adverse effects to the shrubs.

Elderberry shrubs that could support valley elderberry longhorn beetle are likely to occur adjacent to the project site. Although there is little potential for disturbance to nearby elderberry shrubs during project implementation, focused pre-construction surveys for elderberry shrubs would be conducted on land within 100 feet of the project site. If elderberry shrubs with 1.0 inch or greater stem diameter are found, USFWS conservation guidelines for valley elderberry longhorn beetles would be followed by establishing a 100-foot buffer around such shrubs, wherever feasible, to completely avoid potential impacts to valley elderberry longhorn beetles (USFWS 1999a). Earthmoving activities, pesticide use, and other construction and maintenance activities with potential to impact valley elderberry longhorn beetles and their host shrubs would be avoided within these buffer zones. If the establishment of a 100-foot buffer is infeasible, then USFWS would be consulted. It is anticipated that either a new buffer width would be agreed upon along with additional protections for the safety of the beetles and shrubs, or that shrubs that could not be adequately protected would be transplanted to a protected location before construction would begin, in accordance with established USFWS guidelines (USFWS 1999a). If valley elderberry longhorn beetles are delisted in the future, as has recently been proposed by USFWS (USFWS 2006), these measures may be amended to conform to any revised USFWS guidelines regarding this species.

Because the project would avoid adverse effects to elderberry shrubs and valley elderberry longhorn beetles, the proposed project would result in a *less-than-significant* impact on valley elderberry longhorn beetles.

IMPACT Potential Disturbance of Nesting Raptors, Special-status Birds, Migratory Birds, and Bats.
4.4-e *Implementation of the proposed project could result in a **potentially significant** construction-related loss and/or disturbance of birds and bats nesting or roosting in or near the project site.*

Implementation of the proposed project could result in construction-related loss and/or disturbance of birds and bats nesting or roosting in or near the project site. Several special-status birds are known or have the potential to nest adjacent to the project site (Table 4.4-3). Many common bird species may also nest in or near the project site, and are protected under MBTA and the California Fish and Game Code, with raptors receiving additional protection. Restoration activities could result in direct loss of orchard nests and bat roosting sites when orchard vegetation is removed. Birds nesting in habitat adjacent to the project site could also be disturbed by restoration activities, potentially resulting in nest abandonment and mortality of eggs or chicks. These disturbances could result in a **potentially significant** impact.

Fisheries

IMPACT Potential Effects to 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. The creation of recreational facilities would involve construction activities and increased visitation of the project area; however, this potential impact would be minimized with implementation of a storm water pollution prevention plan and therefore would not result in significant impacts to the Sacramento River fisheries. Restoration of riparian habitat would be expected to have a long-term **beneficial** effect to fish.*

Implementation of the proposed project would result in an overall net benefit to fisheries and aquatic resources of the Sacramento River. Implementation of the proposed project would not directly alter any instream fish habitat as all project activities and construction would take place on the floodplain. Implementation of the habitat restoration would utilize standard agricultural practices already in use throughout the project area, including orchard removal, disking, seeding, and planting. Irrigation system modification and expansion would include standard trench and backfill techniques. Minor and temporary increases in sediment load to the river could also occur during flood events. Increased sediment input could increase turbidity and reduce feeding efficiency of juvenile and adult fish. However, native vegetation would be planted concurrently or soon after removal of existing vegetation to minimize the potential for severe erosion to occur on disturbed, unprotected land. Because the Sacramento River is typically a turbid system during flood events, additional sediment input resulting from the proposed restoration project activity would be comparatively minimal, and is not anticipated to have any noticeable effect relative to the overall condition of the river. Gravel recruitment rates would not be significantly affected. In addition, restoration of agricultural lands to natural riparian areas would result in long-term beneficial effects to fish in the Sacramento River by increasing the complexity of the floodplain aquatic environment and providing cover, food, and other habitat components.

The construction of recreational facilities on the Nicolaus property would convert approximately 240 acres from orchard and related agricultural facilities to recreational day use facilities, campgrounds, and an access road. Ground-disturbing activities could potentially result in soil erosion and/or sedimentation of local drainages or the Sacramento River channel and subsequent water quality degradation, which in turn could result in potential adverse effects to special-status fish. However, these impacts would be minimized with implementation of a Storm Water Pollution Prevention Plan and best management practices (see Impact 4.3c in Section 4.3, “Hydrology, Water Quality, and River Geomorphology”). Additionally, replacing the existing agriculture land use with restored riparian habitat and recreation facilities would result in a decrease in pesticide and herbicide applications, reducing the potential impacts of these chemicals to fish during flood events. Operation of recreational facilities would increase the amount of vehicle traffic in the project area, thus potentially increasing the amount of vehicle-related contaminants entering the Sacramento River during flood events (see Impact 4.3d in Section 4.3, “Hydrology, Water Quality, and River Geomorphology”). However, any increase in vehicle-related

contaminants on the project site would be expected to be relatively small due to the anticipated low-intensive and seasonal use of the area.

Because the benefits to fisheries of the proposed habitat restoration are expected to be more substantial than any potential construction, maintenance, or visitor use impacts that may occur, the overall effect of the proposed project is considered *beneficial* to fish habitat and special-status fish species.

4.4.4 MITIGATION MEASURES

The proposed project would implement specific actions to ensure avoidance of impacts to plants, wildlife, and fisheries during both habitat restoration and recreation facility development at the project site. These actions support the goals and guidelines of the Park Plan, which emphasizes the protection of special-status species as well as the restoration and conservation of native ecosystems.

Mitigation Measure 4.4-e: Avoidance of Disturbance to Nesting Raptors and Special-status Birds.

Osprey, white-tailed kite, northern harrier, Cooper's hawk, Swainson's hawk, western yellow-billed cuckoo, bank swallow, loggerhead shrike, yellow warbler, and yellow-breasted chat are known to or have potential to nest adjacent to the project site. In addition to these special-status species, the nests of all raptor species are protected under §3503.5 of the California Fish and Game Code. Nest disturbance may be entirely avoided by limiting construction to the non-breeding season (generally September 1 to January 31) to the extent feasible. To avoid nest disturbance and a potential reduction in fledging success resulting from construction activities during the breeding season (February 1 to August 31), focused surveys for raptors and special-status birds would be conducted by a qualified biologist no more than 14 days prior to the beginning of construction. Surveys for Swainson's hawk nests would include all areas of suitable nesting habitat within 0.25-mile of the two sites. To the extent feasible, guidelines provided in the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley (Swainson's Hawk Technical Advisory Committee 2000) would be followed. Surveys for other raptors and special-status birds would include suitable nesting habitat within 500 feet of each site.

If no active nests are found, no further measures would be needed. If active nests are found, impacts would be avoided by the establishment of appropriate buffers and/or nest monitoring by a qualified biologist. The size of the buffer would be determined by a qualified biologist and may vary, depending on the species biology, location, nest stage, and specific construction activities to be performed while the nest is active. No construction activities would occur within a buffer zone until a qualified biologist confirms that the nest is no longer active.

Mitigation Measure 4.4-e: Avoidance of Disturbance to Nesting Migratory Birds and Roosting Bats.

As discussed for nesting raptors and special-status birds, nest disturbance of other migratory birds may be entirely avoided by limiting construction to the autumn and winter non-breeding season to the extent feasible. To avoid nest disturbance and a potential reduction in fledging success during any construction activities during the spring and summer breeding season, the project site's walnuts and almonds would be harvested for the last time the previous autumn, and standard orchard maintenance practices (e.g., mowing and herbicide applications) would continue until construction begins to discourage bird nesting and bat roosting in the orchard prior to felling of the trees.

Because orchards would be restored to native habitats anticipated to support a higher diversity and abundance of wildlife species without significantly reducing populations of the species currently on site, the proposed restoration of native riparian habitat would have a long-term beneficial effect on wildlife. Potential impacts to existing wildlife that may occur during construction, maintenance, and visitor use of the proposed riparian habitat and recreational facilities would be expected to be minor, and would be largely avoided or minimized through the wildlife protection measures described in Mitigation Measure 4.4-e. These measures comply with the Park Plan

and all applicable state and federal laws. Because the benefits to wildlife of the proposed habitat restoration are expected to be more substantial than any potential construction, maintenance, or visitor use impacts that may occur, the overall effect of the proposed project is considered *beneficial* to wildlife species, and there would not be any substantial adverse effect to special-status species, their use of wildlife movement corridors, or nursery sites.

4.5 CULTURAL RESOURCES

This section presents a description of the cultural resources setting for the proposed project. The affected environment described in this section is based upon information gathered during research and field investigations conducted by EDAW in 2006, which was presented in the *Cultural Resources Inventory and Assessment, Singh and Nicolaus Restoration and Public Access Project*, dated March 2007 (Appendix E). The cultural resource impact analysis subsection addresses the potential for disturbance of documented and undocumented cultural resources during construction activities. Mitigation measures are recommended to reduce any potentially significant impacts.

This analysis reiterates the findings in the Bidwell-Sacramento River State Park (BSRSP) General Plan and EIR (Park Plan), regarding impacts to cultural resources (Preliminary General Plan and Draft EIR, Impact CUL). The proposed project actions are consistent with the Park Plan, as described in Chapter 1, “Introduction,” of this DEIR. While the Singh Unit was discussed in Section 2.3.3 of the Park Plan, the Nicolaus property was not identified as a potential acquisition site at the time the Park Plan was prepared. Therefore, this analysis addresses project-specific impacts on the proposed project site, including the Nicolaus property, to ensure complete analysis of the project’s potential effects on cultural resources.

4.5.1 ENVIRONMENTAL SETTING

NATURAL SETTING

The project area and its vicinity have been occupied and used by diverse peoples for thousands of years. The varied natural setting and accessibility to other areas of the valley, the Sierra Nevada foothills, and the coastal regions have attracted a wide range of native and immigrant cultural groups. Evidence for prehistoric patterns of land use is located within the vicinity: however, the remains of major historic land-use along the Sacramento River appear, from the results of limited investigations, to have been obliterated by seasonal flooding, erosion, and channel migration along the Sacramento River. Topography, vegetation, water sources, and the ease of waterway and overland transportation to a much wider geographic region make it likely that the area was heavily utilized throughout prehistoric and early historic times. However, seasonal flooding of the Sacramento River has deposited large amounts of silt on agricultural lands, which has resulted in the covering of archaeological deposits; particularly along the east bank of the river. Given such a landscape, it is almost certain that undocumented archaeological sites, features, and artifacts are present within the project site and the immediate vicinity. As such, encountering such resources during ongoing and future development needs to be addressed if these resources are to be preserved for future generations.

Patterns of historic-era and prehistoric land-use and activities within the project site and the surrounding area have been dictated to a great extent by the nature of the area’s geomorphology and the biotic resources that are found in this unique and dynamic setting. The Sacramento River and its associated tributary creeks, while constituting a great attraction for settlement and resulting in the deposition of many cultural remains, has also affected those same sites through heavy erosion and the meandering of river and stream courses over centuries. Consequently, it is not possible to discuss the nature of cultural resources in the area without first examining the nature of the river system itself.

Three Sacramento Valley geomorphic regions (i.e., floodplains and natural levees, flood basins, and low alluvial plains and fans) are located within the project site and the immediate vicinity (see Bryan 1923; Hinds 1952:145–157; Poland and Evenson 1966:239). Prior to the heavy gold mining operations of the 19th and 20th centuries and large-scale reclamation projects, several of the perennial and intermittent streams (e.g., Butte and Big Chico Creeks) were prevented from flowing into the Sacramento River by natural levees that bordered the river. These water courses drained into the valley floor, eventually dispersing in tule marshlands bordering the main river or in the flood basins (Thompson 1961:299; Warner and Hendrix 1985:5.8–5.9 in Bayham and Johnson 1990:20).

It was the rich and diverse floral and faunal species fostered by these marshland environments that attracted Native Americans.

Historic aerial photographs, coupled with sediment analysis of the Sacramento River floodplain, provide evidence of a dynamic system in a state of constant change. The area west of Pine Creek, and the west side of the Sacramento River opposite Mud and Big Chico creeks, has seen numerous changes in the river channel over the last 120 years (Larsen et al. 2002:14–16). Some of these channel shifts resulted in prominent landforms that are visible today. Pine Creek Bend (Dunning Slough), in particular, changed and steadily migrated downstream throughout the late 1800s and well into the 20th century. Between 1870 and 1920, the Jenny Lind Bend, located between Pine and Big Chico creeks, also migrated downstream. During the late 1800s the ever-shifting river channel formed the area known as the Indian Fishery to the west of the current project. Coupled with heavy historic mining and reclamation impacts to the river channel and the surrounding floodplain areas, the constant channel migrations of the Sacramento River and nearby creeks have likely obliterated many historic and prehistoric sites.

CULTURAL SETTING

To place the prehistoric and historic resources of the project area into a broader context, they need to be discussed within a larger cultural framework. The presence of a variety of natural resources, topography, and proximity to important transportation routes made the project area an ideal location for prehistoric and historic settlement. Consequently, although no sites, features or artifacts have been formally recorded within the project site, many such resources are likely to be encountered, although they may be buried under a foot or more of sediments.

Prehistoric Archaeological Context

Archaeological investigations in the general area have been somewhat limited, and while contributing a great deal to the body of knowledge of the prehistory of the region, there are many issues which are poorly understood. The first scientific studies relevant to the region occurred in 1907 when the University of California, Berkeley conducted reconnaissance projects in the Tehama and Red Bluff areas (Nelson 1907). Little else in the way of academic research was conducted until the 1950s when various large-scale water projects were constructed. The River Basin Survey resulted in a considerable body of research prior to the construction of a number of large water projects. One of the most important portions of this study included extensive inventories and excavations of prehistoric sites for the Oroville Dam (Treganza 1954). Treganza also conducted salvage excavations at prehistoric sites prior to the construction of the Redbank Reservoir in nearby Tehama County (Treganza 1954). Investigations by Chartkoff and Chartkoff (1983) at the Patrick Site (4-But-1), to the east of the current project, built upon the prehistoric cultural sequence developed for the Oroville vicinity first proposed by Olsen and Riddell (1963) (based in part of Treganza's 1953 work), which was further updated and expanded by Ritter (1970) and Kowta (1988).

Apart from the more broad-based findings of the work of Treganza, Chartkoff and Chartkoff, Riddell, Olsen, Ritter, and Kowta, locally focused archaeological investigations have occurred in the immediate project vicinity. These include the excavations conducted by Bayham and Johnson (1990) at CA-Gle-105 on the west bank of the Sacramento River. The archaeological remains at this site were interpreted as those of a small summer camp occupied during the Early/Middle Horizon (ca. 3000 years before present [BP]), and again following a hiatus around 2000–2500 BP. Deal (1987), reported on research on the site of CA-But-288, east of the Sacramento River and west of Pine Creek, that revealed evidence for shifting subsistence strategies over time.

Along with numerous cultural resource management studies that have been performed in the general area, the results of these investigations constitute the bulk of what is known regarding early Native American cultural sequences in the region. However, while relatively little may be known about specific variations in early Native American subsistence, technological, and ritual practices, broad patterns of material culture have been documented over large geographic regions in California, including the area surrounding the current project.

The earliest well-documented entry and spread of humans into California occurred at the beginning of the Paleo-Indian Period (12,000–8,000 BP). Social units are thought to have been small and highly mobile. Known sites have been identified within the contexts of ancient pluvial lake shores in the Great Basin and the coastline of California and are evidenced by such characteristic hunting implements as fluted projectile points and flaked stone crescent forms. Prehistoric adaptations over the ensuing centuries have been identified in the archaeological record by numerous researchers working in the area since the early 1900s, as summarized by Fredrickson (1974), Moratto (1984), and White (2003a).

Beardsley (1948) and Lillard et al. (1939) and others conducted numerous studies that form the core of our early understanding of upper Central Valley archaeology. Little has been found archaeologically which dates to the Paleo-Indian or the subsequent Lower Archaic time periods (White 2003a:11–12). The lack of sites from these earlier periods may be due to high sedimentation rates, which have left the earliest sites deeply buried and inaccessible. However, archaeologists have recovered a great deal of data from sites occupied during the Middle Archaic period (5000–3000 BP). During this time, the broad regional patterns of foraging subsistence strategies gave way to more intensive procurement practices. Subsistence economies were more diversified, possibly including the introduction of acorn processing technology. Human populations were growing and occupying more diverse settings. Permanent villages that were occupied throughout the year were established; primarily located along major waterways.

The onset of status distinctions and other indicators of growing sociopolitical complexity mark the Upper Archaic Period (3000–1500 BP). Archaeological evidence suggests exchange systems became more complex and formalized and evidence of regular, sustained trade between groups was seen for the first time (White 2003a: Fig. 4).

Several technological and social changes characterized the Emergent Period (1500–150 BP) when the bow and arrow were introduced, ultimately replacing the dart and atlatl. Territorial boundaries between groups became well established and were recorded in early historic and ethnographic accounts. It became increasingly common that distinctions in an individual's social status could be linked to acquired wealth. Exchange of goods between groups became more regularized with more goods, including raw materials, entering into the exchange networks. In the latter portion of this period (500–200 BP), exchange relations became highly regularized and sophisticated. The clamshell disk bead became a monetary unit for exchange, and increasing quantities of goods moved greater distances just prior to large-scale European settlement of California (White 2003a:13–14).

Ethnographic Context

Ethnographically, the east bank of the Sacramento River was inhabited primarily by the Maidu (also referred to as the Konkow or the Mechoopda) who controlled extensive territory (Dreyer 1984:41, 43, White 2003a:21). The most extensive documentation of the Maidu was compiled by Dixon (1905), with other works by Hill (1978), Kroeber (1925, 1932), Riddell (1978), and Voegelin (1942).

The name Konkow, derived from the anglicized version of the native term *koyo-mkawi*, meaning “meadow land,” refers to peoples whose territory included sections of the Sacramento Valley floor and portions of the Sierra foothills east of the present-day cities of Chico and Oroville (White 2003a: 21, Fig. 11). Formal delineations of the territory may have included prominent physiographic features and landforms, although any certainty as to the early historic-period boundaries have been lost through decimation of the tribe resulting from disease and the removal of the people from their traditional lands during the 19th century. In general, such boundaries may not have been as hard and fast as reported in ethnographic accounts as extensive trail systems existed within the valley and foothill regions that connected the Konkow with other Maidu groups and tribes throughout northern and central California.

With a few notable exceptions, the lifeways of the Konkow differed little from their neighbors in the valley and in the Sierra foothills to the east. Probably the main difference, other than linguistic variation, occurred in the

spiritual realm as the Konkow adhered to the ritual and belief systems associated with the Kuksu cult involving the impersonation of deity figures (White 2003a:21). Many other groups in the area did not practice these rituals, although the Nisenan and other non-Maidu central California peoples did (Dixon 1905:322).

Konkow settlement conformed to a “village community” pattern that served as the only formal political structure of the tribe (Kroeber 1925:398). Village communities, which consisted of several closely spaced small settlements and a larger village containing a semi-subterranean earth-covered ceremonial lodge, were autonomous and self-sufficient units (White 2003a:21). Individual communities probably numbered around 200 inhabitants and “owned” or controlled specific territories in which hunting, gathering, and fishing areas were considered common property. The most politically influential man of each community lived in the central village. This head-man acted as an advisor and spokesman for his group, although he possessed little in the way of concrete power. This individual was not selected by members of the village community nor was the position hereditary. Rather, the head-man was chosen by the village shaman with the aid of various messenger spirits who could also remove him as they saw fit (Dixon 1905:223–224).

Konkow economic and subsistence patterns were largely based on a seasonal cycle that involved residence in winter village sites in the valley and summer journeys into the mountains for hunting. In the spring, various types of roots, stems, leaves, seeds, and fruits were gathered in large quantities to be dried for winter consumption (Dixon 1905:187). As with many Native American groups in California, the acorn, gathered from a variety of oak species, formed the staple food of the Konkow diet.

In general, Konkow and Maidu life remained unchanged for generations until 1833, when a disease epidemic, possibly malaria, decimated tribes throughout central California. During his expedition north along the Sacramento River in 1833, John Work noted the decimation of villages which had been observed earlier in December of 1832 (Maloney 1943 and 1944). The Konkow population and cultural systems probably never fully recovered from the effects of the epidemic that was followed by the Gold Rush period starting in 1849. These two factors combined to thoroughly disrupt their social, spiritual, economic, and subsistence patterns to a point that the Konkow and Maidu were quickly reduced to a marginal existence in the region. Most illustrative of the impact these events had on the Konkow and their Nisenan neighbors are population estimates: in 1846, approximately 8,000 people from these groups were recorded. By 1910, that population had been reduced to less than 1,000 (Riddell 1978:386).

Historic Context

A detailed overview of history pertinent to the area can be found in Hood and McGuire (1981). The historic context presented below summarizes this work and includes additional information obtained from other specific historic accounts and documents.

The earliest documented European entry into the region around the project site occurred in 1808. That year, Gabriel Moraga led an expedition that eventually traveled up the Feather River and then proceeded north along the banks of the Sacramento River, possibly to the current location of Butte City. The purpose of Moraga’s travels was largely to search for suitable locations for new missions and to further establish Spanish rule in the face of increasing foreign pressure, from the Russians in particular. Thirteen years would pass before another formal exploratory expedition into the region was launched. In 1821, Mexican governor Pablo Vicente de Sola sent Captain Luis Arguello with 55 soldiers to drive out reported American and Russian intruders from the areas north and east of San Francisco. Although Arguello’s route is somewhat speculative, it appears he and his party may have eventually followed the Sacramento River north towards the general region located at the confluences of Mud and Big Chico Creeks (Beck and Haase 1974).

Hudson Bay trappers probably visited the project area during the early decades of the 19th century. One such expedition was led by John Work in 1832 and 1833 (Maloney 1943 and 1944). Work’s description of the area provides an excellent account of the area prior to Euro-American development. On his return trip north in August

of 1833 he indicates that the weather was excessively hot with no wind. Two beaver and one elk were killed near the confluence of the Sacramento River and Chico Creek, and he indicates that they camped at a location which has subsequently been identified as Pine Creek (Maloney 1944:133 and 144). The next major exploratory or emigrant group to venture into the area was the Charles Wilkes expedition, led by Lieutenant George Emmons. This party led a group of emigrants into California from the Columbia River, passing south along the west bank of the Sacramento River in October of 1841. Lansford W. Hastings (best known for his scouting of the “Hastings Cut-off” in Utah that eventually doomed the Donner Party) and Joseph B. Chiles led an emigrant party into California, through the area in 1843. This was the same year that John Bidwell, who would have a dramatic impact on the area, first viewed the area surrounding Chico Creek.

The first in a series of events that shaped the economic and cultural landscape in the area occurred during the middle 19th century with the formation of Mexican land grants. In 1844 three such grants were issued and led to the establishment of several prominent ranchos. *Rancho de Farwell*, granted to Edward A. Farwell, was located to the south of the current project; *Rancho Arroyo Chico*, which included the land now occupied by the Singh and Nicolas properties, was awarded to William Dickey; and *Rancho Capay* to the west of the project was granted to Josefa Sotao. John Bidwell, who had supervised some gold mining operations for William Dickey, purchased *Rancho Arroyo Chico* in 1849 and by 1852 had 200 to 300 acres under cultivation.

While wheat was the primary crop during the early agricultural period, it was slowly replaced with orchards between 1883 and 1900. The prominence of agriculture in the region and the profitability of large-scale operations were soon reflected in transportation improvements and innovations in the area that continued to be established well into the 20th century. One notable example of the mutually supporting industries can be seen in the operations of David Reavis, who acquired some 12,000 acres of the Farwell Grant and soon had over 7,000 acres sown in wheat in the 1870s. In part to aid in the transportation of goods to and from his property, he established Reavis Ferry, which crossed the Sacramento River just north of Chico Landing. Later river crossings included the Chico Free Bridge that was first erected in 1882. Flooding destroyed the bridge in 1889, but it was quickly rebuilt and subsequent replacements occurred in 1894, 1901, and 1913.

While various ferries and river crossings facilitated local commerce and transportation, the movement of the vast agricultural output of the region to market relied chiefly on river-borne, and eventually railroad transit. By the late 19th century, river navigation contributed to the viability of the vast rancho holdings, and it was during this time that Chico Landing, situated near the confluence of Big Chico Creek and the Sacramento River, became a substantial link in the shipment of agricultural products from the Bidwell and Richard J. Walsh ranches in particular. As competition to serve these and other large ranch and farm enterprises increased, the principal steamboat owners formed the California Steam Navigation Company in 1854, which basically controlled navigation on the river north of Sacramento. By 1913 the company was operating seven steamers and 23 barges, primarily between Chico Landing east of Chico, and San Francisco Bay (McGowan 1961:304–305).

Although railroads were being built in the Central Valley of California during the 1850s and 1860s, rail lines were not built into the vicinity of the project until the early 1870s, when the California and Oregon Railroad, (a subsidiary of the Central Pacific) was extended to Chico in July of 1870, providing a faster and more efficient means of bringing produce and cattle to market (White 2003a:50–51). As the area became more connected by rail to Sacramento, commercial river traffic soon decreased. One of the more notable lines in the area was the Northern Electric Rail, which connected Chico directly with Sacramento. This line ceased to exist as a separate company in 1921 when it was absorbed by the Southern Pacific Railroad, which still operates in the area today as the Union Pacific Railroad.

4.5.2 REGULATORY SETTING

CEQA

Cultural resources in California are protected by a number of federal, state, and local regulations, statutes, and ordinances. Prior to approval of discretionary projects, potentially significant impacts of the project on unique archaeological resources and historical resources must be considered under CEQA (Public Resources Code Sections 21083.2 and 21084.1) and the State CEQA Guidelines (California Code of Regulations Title 14, Section 15064.5). The State CEQA Guidelines define a “historical resource” as “a resource listed or eligible for listing on the California Register of Historical Resources” (CRHR) (Public Resources Code Section 5024.1). A historical resource may be eligible for inclusion on the CRHR if it:

- ▶ is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; or
- ▶ is associated with the lives of persons important in our past; or
- ▶ embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- ▶ has yielded, or may be likely to yield, information important in prehistory or history.

In addition, the State CEQA Guidelines (Section 15064.5) require consideration of “unique archaeological resources.” If an archaeological site does not meet the criteria for inclusion on the CRHR (which would qualify it as an historical resource), but does meet the definition of a unique archeological resource as outlined in the Public Resource Code (Section 21083.2), substantial adverse effects to it may be treated as a significant impact under CEQA. Mitigation treatment options under Public Resources Code Section 21083.2 for significant impacts to unique archaeological resources include a project that preserves such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a “unique archaeological resource”).

Section 15064.5(e) of the State CEQA Guidelines and State law (Health and Safety Code Section 7050) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. State CEQA Guidelines Section 15064.5(d) and State law directs the lead agency/property owner to consult with the appropriate Native Americans as identified by the NAHC and directs the lead agency (or property owner) to develop an agreement with the Native Americans for the treatment and disposition of the remains.

The State CEQA Guidelines Section 15064.5(b)(3) indicates that where significant impacts to an historical resource occurs, if a project follows the federal *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995), the impact shall generally be mitigated to a level of less than significant.

PARK PLAN GOALS AND GUIDELINES FOR CULTURAL RESOURCES

Recorded and unrecorded cultural resources within the Bidwell-Sacramento State Park and in the surrounding areas are an important component of the cultural heritage of the region. These include prehistoric and historic sites, features, and artifacts, and include those linked to the prominent Bidwell family who donated much of the Park’s land to the Department for the use and inspiration of the people of California. Preservation and

interpretation of cultural resource features would be crucial in understanding early Native American and historic land use patterns in the vicinity of the Sacramento River.

As part of their commitment to the preservation of archaeological and historic values, the following goal and guidelines provide the basis for management of cultural resources within Bidwell-Sacramento State Park.

Goal ER-2.1: Locate and assess the significance of cultural resources within the Park.

- ▶ **Guideline ER-2.1-1:** Develop a Cultural Resource Management Plan (CRMP) for the Park. As part of the development of a CRMP, a comprehensive survey of the Park is necessary to survey, assess, and record known archaeological and historical resources within the Park. In addition, the CRMP will provide recommendations for the protection, preservation, and interpretation of significant cultural resources.
- ▶ **Guideline ER-2.1-2:** Perform cultural resource investigations of development sites prior to the construction of facility developments. If significant cultural resources are found, implement protective measures in compliance with federal and state laws and regulations.
- ▶ **Guideline ER-2.1-3:** Investigate the presence of cultural resources on nearby properties in collaboration with other stakeholders, where feasible.

4.5.3 ENVIRONMENTAL IMPACTS

CULTURAL RESOURCE INVENTORIES

Numerous sources were contacted and consulted to gather information regarding the existing conditions and cultural resources that may be located within the project area. A records search was conducted at the Northeast Information Center at California State University (CSU), Chico in February 2003, and updated with documents obtained in November 2006. Historic maps that were examined consisted of General Land Office (GLO) plat maps, including *Sacramento Valley* 1844, *Rancho Capay* 1858, *Rancho Arroyo Chico* 1859, and historic Butte County maps dated 1886, 1894, 1901, and 1913.

A small number of cultural resource inventories have been conducted within the vicinity of the project, but have met with only limited success in identifying archaeological resources associated with the prehistoric and early historic eras. Archival research, however, indicates a rich historic relationship between early agriculture, and development within the region and sites, features, and artifacts associated with these periods and activities likely exist within the immediate vicinity.

Inventories conducted thus far have primarily been limited to those associated with transportation, reclamation, and recreation projects. These investigations are summarized in Table 4.5-1. The entire Irvine Finch River Access was inventoried by the Department of Transportation as part of an assessment for a proposed bridge replacement on State Route (SR) 32. Small portions of the Bidwell-Sacramento River State Park Indian Fishery, Pine Creek Landing, and Big Chico Creek subunits were inventoried for various projects (Jones and Stokes 1996, Hood and McGuire 1981, Johnson 1975). These investigations have located four prehistoric sites (CA-But-189, CA-But-191, CA-But-402, CA-But-717) and a historic water transmission facility (CA-But-1352) within 1 mile of the project area.

As part of a large management plan, CSU, Chico conducted surveys of approximately 7,100 acres along the Sacramento River, including 657 acres along the west side of the river opposite the Singh parcel. Within this survey block no sites were discovered; however, five isolated finds, a trailer frame (P-11-625), two basket fish traps (P-11-625), a metasedimentary cobble core tool, a 20th-century building pad, and a piece of 19th-century glass were located (White 2003b).

**Table 4.5-1
Previous Cultural Resource Investigations Conducted Within and Near the Project Site**

Report	Author / Date	NEIC No.
Cultural Resources Inventory Report for the M&T Ranch/Parrott Pumping Plant and Fish Screen Project, Butte County, California	Jones and Stokes (1996)	B-L-633
No Title	Manning (1983)	B-L-574
Archaeological Reconnaissance of 26 Erosion Sites along the Sacramento River, Chico Landing to Red Bluff, Butte, Glenn, and Tehama counties, California	Johnson (1975)	B-150
Bidwell River Park Project (Chico Landing)	Hood and McGuire (1981)	--
Archaeological Reconnaissance of the Bidwell River Park	Hetherington (1980)	--
Cultural Resource Study for the Bidwell-Sacramento River Restoration Project, Butte County, California	Atchley (2000)	
Cultural Resource Overview and Management Plan	White (2003b)	6867
Source: EDAW 2006		

NATIVE AMERICAN CONSULTATION

Project input was solicited from the NAHC, the Mechoopda Indian Tribe of Chico, and chairpersons with the Enterprise and Mooretown Rancherias at Oroville. A review of the Sacred Land Files by the NAHC did not reveal the presence of sensitive resources within the proposed project.

In a phone conversation between EDAW and Arlene Ward with the Mechoopda Indian Tribe of Chico, Ms. Ward expressed concern for the potential presence of subsurface deposits. She requested that a monitor affiliated with the Mechoopda Tribe be present during the removal of tree stumps and during any subsurface excavations associated with facilities development within the Nicolaus and Singh parcels. Further, the Mechoopda would like to see protocols established for the treatment of archaeological deposits that may be discovered during monitoring, and mitigation procedures to be followed in the event that significant subsurface deposits are encountered.

THRESHOLDS OF SIGNIFICANCE

The proposed project would be considered to have a significant effect on cultural/archaeological resources if it would:

- ▶ Cause a substantial adverse change in the significance of a historical resource, as defined by State CEQA Guidelines Section 15064.5(a);
- ▶ Cause damage to or destroy a unique archaeological resource, as defined by State CEQA Guidelines Section 21083.2(g);
- ▶ Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- ▶ Disturb any human remains, including those interred outside of formal cemeteries (PRC Section 5097.98).

A historical resource may include archaeological sites. Substantial adverse change means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resources is materially impaired. Material impairment occurs when a project demolishes or materially alters, in an adverse manner, those physical characteristics that convey a resource’s historical significance.

If an archaeological resource is neither a unique archaeological resource nor a historical resource, the effects on that resource shall not be considered a significant effect on the environment.

In order to be considered a fossil, a paleontological specimen must be more than 10,000 years old. Generally, rock formations within 8 to 10 feet of the soil surface are composed of deposits that are less than 10,000 years old. Since ground disturbing project activities would take place only within the top foot of soil, potential impacts to paleontological resources are not further addressed in this DEIR.

IMPACT ANALYSIS

IMPACT 4.5-a **Potential Disturbances to Undocumented Cultural Resources.** *Implementation of the project, including site preparation, planting, and recreation facilities development, may affect currently undiscovered or unrecorded archaeological sites. The possibility of disturbing unrecorded resources is considered a **potentially significant** impact.*

Background research coupled with field observations indicates the presence of a historic farmstead consisting of four buildings and three isolated prehistoric artifacts on the project site. There is also the potential for the presence of subsurface deposits particularly in the southeast corner of the Nicolaus parcel, where the three isolated finds are associated with a terrace consisting of older alluvium, which appears to be covered with a layer of finer silt deposited during recent and historic flooding episodes. The historic-era farmstead was recommended not eligible for inclusion in the CRHR. In addition, because of their lack of data potential and association, none of the isolated prehistoric artifacts noted within the project site are considered eligible for CRHR listing (EDAW 2006). However, areas surrounding the Sacramento River were important to Native Americans as evidenced by the large number of habitation sites in the vicinity of the project. Because of this sensitivity, there is a high potential for the presence of subsurface archaeological deposits and human remains, particularly on the old alluvial terrace in the southeast corner of the Nicolaus property, which may be impacted by project-related ground disturbing activities. This impact is considered **potentially significant**.

IMPACT 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.*

Activities related to implementation of the proposed project would include orchard removal, discing, seeding, planting, and development of recreational facilities. Many of these activities are standard agricultural practices already in use throughout the study area. Irrigation system modification and expansion would include standard trench and backfill techniques. Because of the proximity to the Sacramento River, and previous investigations in the region which have resulted in the discovery of human remains often associated with Native American habitation locales, there is a high potential for human remains to be uncovered during ground disturbing activities. The potential for buried human remains to be disturbed as a result of proposed project activities is considered a **potentially significant** impact.

4.5.4 MITIGATION MEASURES

Mitigation Measure 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.

All excavations shall be monitored by a qualified professional archaeologist. If a 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 State Parks staff shall be notified of the discovery. State Parks shall retain a professional archaeologist who, in consultation with the Mechoopda Tribe of Chico, shall determine whether the

resource is potentially significant as per the CRHR and develop appropriate mitigation. Appropriate mitigation may include no action, avoidance of the resource, and potential data recovery.

Implementation of Mitigation Measure 4.5-a would reduce potentially significant impacts resulting from inadvertent damage or destruction of unknown cultural resources during ground disturbing activities to a *less-than-significant* level.

Mitigation Measure 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.

California law recognizes the need to protect interred human remains, particularly Native American burials and associated items of patrimony, from vandalism and inadvertent destruction. The procedures for the treatment of discovered human remains are contained in California Health and Safety Code Section 7050.5 and Section 7052 and California Public Resources Code Section 5097.

In accordance with the California Health and Safety Code, if human remains are found in any location other than a dedicated cemetery, the California Health and Safety Code requires that excavation is halted in the immediate area. The county coroner shall be notified and is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (Section 7050.5[c]).

The responsibilities of the NAHC for acting upon notification of a discovery of Native American human remains are identified within the California Public Resources Code (PRC Section 5097.9). The NAHC is responsible for immediately notifying the person or group it believes is the Most Likely Descendant (MLD). With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. This should be conducted within 24 hours of their notification by the NAHC (PRC Section 5097.98[a]). If an agreement for treatment of the remains cannot be resolved satisfactorily, any of the parties may request mediation by the NAHC (PRC Section 5097.94[k]). Should mediation fail, the landowner or the landowner's representative must re-inter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC Section 5097.98[b]).

Through agreement on the treatment and disposition of human remains reached between the MLD and the California Department of Parks and Recreation with the assistance of the archaeologist, or through mediation by the NAHC, implementation of Mitigation Measure 4.5-b would reduce potentially significant impacts associated with the discovery of human remains to a *less-than-significant* level.

4.6 AIR QUALITY AND CLIMATE CHANGE

Park Plan Guideline AO-3.3-1 states:

Consult with applicable air pollution control districts (APCDs) and/or air quality management districts (AQMDs) prior to any major facility development projects in the Park, and implement all rules and regulations as required by these agencies.

Pursuant to this Guideline, this section includes a description of existing air quality conditions, summary of applicable regulations, and an analysis of potential short-term and long-term air quality impacts of the proposed project. The method of analysis for short-term construction, long-term regional (operational), local mobile source, odor, and toxic air contaminant (TAC) emissions is consistent with the recommendations of the Butte County Air Quality Management District (BCAQMD). The analysis also includes consideration of the potential contribution of the project to global climate change through the production of greenhouse gas emissions (GHGs). In addition, mitigation measures are recommended, as necessary, to reduce significant air quality impacts.

4.6.1 ENVIRONMENTAL SETTING

The project site is located in Butte County, which is within the Northern Sacramento Valley Air Basin (NSVAB). The NSVAB also comprises all of Shasta, Tehama, Glenn, Butte, Colusa, Sutter, and Yuba counties (BCAQMD 2004). The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by pollutant sources and the atmosphere's ability to transport and dilute such emissions. Natural factors which affect transport and dilution include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

TOPOGRAPHY, METEOROLOGY, AND CLIMATE

The NSVAB is bounded on the north and west by the Coastal Mountain Range and on the east by the southern portion of the Cascade Mountain Range and the northern portion of the Sierra Nevada Mountains. These mountain ranges reach heights in excess of 6,000 feet with peaks rising much higher. The mountain ranges provide a substantial physical barrier to locally created pollution as well as pollution that is transported northward on prevailing winds from the Sacramento Metropolitan area. Although a significant area of the NSVAB is 1,000 above feet sea level, the vast majority of its populace lives and works below that elevation. The valley is often subjected to inversion layers that, coupled with geographic barriers and high summer temperatures, create a high potential for air pollution problems (BCAQMD 2004).

Meteorology (weather) and topography play major roles in ozone formation in the NSVAB. When the weather is warm and the winds are light, a vertical downward motion of air and a natural cooling of the earth's surface act together to form an inversion that traps pollutants. Sunlight then causes a chemical reaction between the hydrocarbons and oxides of nitrogen (NO_x) to form ozone. The NSVAB is shaped like an elongated bowl. Temperature inversion layers can clamp a lid on the bowl, allowing air pollution to rise to unhealthy levels. Weather conditions cause air pollution concentrations to fluctuate widely from day to day and season to season.

Topography alone gives the NSVAB great potential for trapping and accumulating air pollutants. The strong inversions typical of NSVAB summers are caused by subsidence, the slow sinking of air causing compressional warming. The surface inversions typical of winter are formed primarily at night as air is cooled when it comes in contact with the earth's cold surface. These are called radiation inversions. Temperature inversions prevent pollutants from rising and being diluted vertically. Thus, pollutants remain trapped in the layer of air where people breathe. Summer subsidence inversions occur on over 90% of summer days; they persist throughout the day and tend to intensify during the afternoon. Winter radiation inversions occur on over 70% of winter nights,

but are usually destroyed by daytime heating, bringing a rapid improvement in air quality by afternoon. Both types of inversion mechanisms may operate at any time of the year, and in the fall both may occur together to produce the heaviest pollution potential (BCAQMD 2004).

EXISTING AIR QUALITY—CRITERIA AIR POLLUTANTS

Concentrations of the following air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable and fine particulate matter (PM₁₀ and PM_{2.5}), and lead are used as indicators of ambient air quality conditions. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documents are available, they are commonly referred to as “criteria air pollutants” (CAPs).

A brief description of each criteria air pollutant including source types, health effects, and future trends is provided below along with the most current attainment area designations and monitoring data for the project area.

Ozone

Ozone is a photochemical oxidant, a substance whose oxygen combines chemically with another substance in the presence of sunlight, and the primary component of smog. Ozone is not directly emitted into the air, but is formed through complex chemical reactions between precursor emissions of reactive organic gases (ROG) and NO_x in the presence of sunlight. ROG are volatile organic compounds that are photochemically reactive. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_x are a group of gaseous compounds of nitrogen and oxygen that results from the combustion of fuels.

Ozone located in the upper atmosphere (stratosphere) acts in a beneficial manner by shielding the earth from harmful ultraviolet radiation that is emitted by the sun. However, ozone located in the lower atmosphere (troposphere) is a major health and environmental concern. Meteorology and terrain play a major role in ozone formation. Generally, low wind speeds or stagnant air coupled with warm temperatures and clear skies provide the optimum conditions for formation. As a result, summer is generally the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. Therefore, ozone is a regional pollutant that often affects large areas. In general, ozone concentrations over or near urban and rural areas reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry (Godish 2004).

The adverse health effects associated with exposure to ozone pertain primarily to the respiratory system. Scientific evidence indicates that ambient levels of ozone affect not only sensitive receptors, such as asthmatics and children, but healthy adults as well. Exposure to ambient levels of ozone ranging from 0.10 to 0.40 parts per million (ppm) for 1 to 2 hours has been found to significantly alter lung functions by increasing respiratory rates and pulmonary resistance, decreasing tidal volumes, and impairing respiratory mechanics. Ambient levels of ozone above 0.12 ppm are linked to symptomatic responses that include such symptoms as throat dryness, chest tightness, headache, and nausea. In addition to the above adverse health effects, evidence also exists relating ozone exposure to an increase in the permeability of respiratory epithelia; such increased permeability leads to an increase in responsiveness of the respiratory system to challenges, and the interference or inhibition of the immune system’s ability to defend against infection (Godish 2004). Ground level ozone also damages forests, agricultural crops, and some human-made materials, such as rubber, paint, and plastics.

Carbon Monoxide

CO is a colorless, odorless, and poisonous gas produced by incomplete burning of carbon in fuels, primarily from mobile (transportation) sources. In fact, 77% of the nationwide CO emissions are from mobile sources. The other 23% consists of CO emissions from wood-burning stoves, incinerators, and industrial sources.

CO enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, resulting in a drastic reduction in the amount of oxygen available to the cells. Adverse health effects associated with exposure to CO concentrations include such symptoms as dizziness, headaches, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases (EPA 2006a).

The highest concentrations are generally associated with cold stagnant weather conditions that occur during the winter. In contrast to ozone, which tends to be a regional pollutant, CO problems tend to be localized.

Nitrogen Dioxide

NO₂ is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO₂ are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO₂ (EPA 2006a). The combined emissions of NO and NO₂ are referred to as NO_x, which are reported as equivalent NO₂. Because NO₂ is formed and depleted by reactions associated with photochemical smog (ozone), the NO₂ concentration in a particular geographical area may not be representative of the local NO_x emission sources.

Inhalation is the most common route of exposure to NO₂. Because NO₂ has relatively low solubility in water, the principal site of toxicity is in the lower respiratory tract. The severity of the adverse health effects depends primarily on the concentration inhaled rather than the duration of exposure. An individual may experience a variety of acute symptoms, including coughing, difficulty with breathing, vomiting, headache, and eye irritation during or shortly after exposure. After a period of approximately 4 to 12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe, symptomatic NO₂ intoxication after acute exposure has been linked on occasion with prolonged respiratory impairment with such symptoms as chronic bronchitis and decreased lung functions.

Sulfur Dioxide

SO₂ is produced by such stationary sources as coal and oil combustion, steel mills, refineries, pulp and paper mills. The major adverse health effects associated with SO₂ exposure pertain to the upper respiratory tract. SO₂ is a respiratory irritant with constriction of the bronchioles occurring with inhalation of SO₂ at 5 ppm or more. On contact with the moist mucous membranes, SO₂ produces sulfurous acid, which is a direct irritant. Concentration rather than duration of the exposure is an important determinant of respiratory effects. Exposure to high SO₂ concentrations may result in edema of the lungs or glottis and respiratory paralysis.

Particulate Matter

Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM₁₀. PM₁₀ consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires and natural windblown dust, and particulate matter formed in the atmosphere by condensation and/or transformation of SO₂ and ROG (EPA 2006a). Fine particulate matter (PM_{2.5}) includes a subgroup of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less (ARB 2006a).

The adverse health effects associated with PM₁₀ depend on the specific composition of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons, and other toxic substances adsorbed onto fine particulate matter, which is referred to as the piggybacking effect, or with fine dust particles of silica or asbestos. Generally, adverse health effects associated with PM₁₀ may result from both short-term and long-term exposure to elevated concentrations and may include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, alterations to the immune system, carcinogenesis,

and premature death (EPA 2006a). PM_{2.5} poses an increased health risk because the particles can deposit deep in the lungs and may contain substances that are particularly harmful to human health.

Lead

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, as discussed in detail below, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the U.S. Environmental Protection Agency (EPA) set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. EPA banned the use of leaded gasoline in highway vehicles in December 1995 (EPA 2006a).

As a result of EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector have declined dramatically (95% between 1980 and 1999), and levels of lead in the air decreased by 94% between 1980 and 1999. Transportation sources, primarily airplanes, now contribute only 13% of lead emissions. A recent National Health and Nutrition Examination Survey reported a 78% decrease in the levels of lead in people's blood between 1976 and 1991. This dramatic decline can be attributed to the move from leaded to unleaded (EPA 2006a).

The decrease in lead emissions and ambient lead concentrations over the past 25 years is California's most dramatic success story. The rapid decrease in lead concentrations can be attributed primarily to phasing out the lead in gasoline. This phase-out began during the 1970s, and subsequent ARB regulations have virtually eliminated all lead from gasoline now sold in California. All areas of the state are currently designated as attainment for the state lead standard (EPA does not designate areas for the national lead standard). Although the ambient lead standards are no longer violated, lead emissions from stationary sources still pose "hot spot" problems in some areas. As a result, ARB identified lead as a TAC.

MONITORING STATION DATA AND ATTAINMENT AREA DESIGNATIONS

Criteria air pollutant concentrations are measured at several monitoring stations in the NSVAB. The monitoring station closest to the proposed project site is located approximately 8 miles east of the Singh and Nicolaus parcels at on Manzanita Avenue in Chico. Table 4.6-1 summarizes the air quality data from these two stations for the most recent 3 years, 2004 through 2006. The data is not necessarily representative of the project site, because of the distance from the monitor to the site and the monitor location was meant to measure the highest urban ozone concentrations in Chico.

Both ARB and EPA use this type of monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. Unclassified is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation, called nonattainment-transitional. The nonattainment-transitional designation is given to nonattainment areas that are progressing and nearing attainment. The most current attainment designations for the Butte County portion of the NSVAB are shown in Table 4.6-2 for each criteria air pollutant.

**Table 4.6-1
Summary of Annual Ambient Air Quality Data (2004–2006) — Chico Monitoring Station¹**

	2004	2005	2006
Ozone			
Maximum concentration (1-hr/8-hr, ppm)	0.088/0.073	0.083/0.077	0.090/0.080
Number of days state standard exceeded (1-hr)	0	0	0
Number of days national standard exceeded (1-hr/8-hr)	0/0	0/0	0/0
Nitrogen Dioxide (NO₂)			
Maximum concentration (1-hr, ppm)	0.056	0.048	0.048
Number of days state standard exceeded (1-hr)	0	0	0
Annual Average (ppm)	0.011	0.009	0.009
Fine Particulate Matter (PM_{2.5})			
Maximum concentration (µg/m ³)	76.3	82.7	76.1
Number of days national standard exceeded (measured ²)	0	1	1
Respirable Particulate Matter (PM₁₀)			
Maximum concentration (µg/m ³)	115.0	76.0	81.0
Number of days state standard exceeded (calculated ²)	5	5	7
Number of days national standard exceeded (calculated ²)	0	0	0
Notes: ppm = parts per million; µg/m ³ = micrograms per cubic meter			
¹ Measurements of ozone, NO ₂ , PM ₁₀ , and PM _{2.5} are from the Manzanita Avenue Station, Chico, CA			
² Measured days are those days that an actual measurement was greater than the level of the state daily standard or the national daily standard. Measurements are typically collected every 6 days. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.			
Sources: ARB 2007b, EPA 2006b.			

Table 4.6-2 Ambient Air Quality Standards and Butte County Attainment Status						
Pollutant	Averaging Time	California		National Standards ¹		
		Standards ^{2,3}	Attainment Status ⁴	Primary ^{3,5}	Secondary ^{3,6}	Attainment Status ⁷
Ozone	1-hour	0.09 ppm (180 µg/m ³)	N	- ⁹	-	-
	8-hour	0.070 ppm ⁸ (137 µg/m ³)	-	0.08 ppm (157 µg/m ³)	Same as Primary Standard	N
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m ³)	U ¹¹	35 ppm (40 mg/m ³)	-	U/A
	8-hour	9 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)		
Nitrogen Dioxide (NO ₂) ¹²	Annual Arithmetic Mean	0.030 ppm (56 µg/m ³)	-	0.053 ppm (100 µg/m ³)	Same as Primary Standard	U/A
	1-hour	0.18 ppm (338 µg/m ³)	A	-		-
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	-	-	0.030 ppm (80 µg/m ³)	-	
	24-hour	0.04 ppm (105 µg/m ³)	A	0.14 ppm (365 µg/m ³)	-	U
	3-hour	-	-	-	0.5 ppm (1300 µg/m ³)	
	1-hour	0.25 ppm (655 µg/m ³)	A	-	-	-
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	N	- ¹³	Same as Primary Standard	A
	24-hour	50 µg/m ³		150 µg/m ³		
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	N	15 µg/m ³	Same as Primary Standard	A
	24-hour	-	-	35 µg/m ³		
Lead ¹⁰	30-day Average	1.5 µg/m ³	A	-	-	-
	Calendar Quarter	-	-	1.5 µg/m ³	Same as Primary Standard	
Sulfates	24-hour	25 µg/m ³	A	No National Standards		
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m ³)	U			
Vinyl Chloride ¹⁰	24-hour	0.01 ppm (26 µg/m ³)	U/A			

Table 4.6-2 Ambient Air Quality Standards and Butte County Attainment Status					
Pollutant	Averaging Time	California		National Standards ¹	
		Standards ^{2,3}	Attainment Status ⁴	Primary ^{3,5}	Secondary ^{3,6}
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient of 0.23 per kilometer — visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe) because of particles when the relative humidity is less than 70%.	U		

¹ National standards (other than ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM₁₀ 24-hour standard is attained when 99% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. The PM_{2.5} 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.

² California standards for ozone, CO (except Lake Tahoe), SO₂ (1- and 24-hour), NO₂, PM, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. The California ambient air quality standard for NO₂ was amended on February 22, 2007 to lower the 1-hour standard to 0.18 ppm and establish a new annual standard of 0.030 ppm.

³ Concentration expressed first in units in which it was promulgated [i.e., parts per million (ppm) or micrograms per cubic meter (µg/m³)]. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

⁴ Unclassified (U): a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment. Attainment (A): a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a 3-year period. Nonattainment (N): a pollutant is designated nonattainment if there was a least one violation of a state standard for that pollutant in the area. Nonattainment/Transitional (NT): is a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the standard for that pollutant.

⁵ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

⁶ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

⁷ Nonattainment (N): any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant. Attainment (A): any area that meets the national primary or secondary ambient air quality standard for the pollutant. Unclassifiable (U): any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

⁸ This concentration effective May 17, 2006.

⁹ The 1-hour ozone NAAQS was revoked on June 15, 2005.

¹⁰ ARB has identified lead and vinyl chloride as TACs with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

¹¹ Designation for Butte County; the designation is different for one or more other counties in the NSVAB.

¹² The CAAQS were amended on February 22, 2007, to lower the 1-hour standard to 0.18 ppm and establish a new annual standard of 0.03 ppm. These changes become effective after regulatory changes are submitted and approved by the Office of Administrative Law, expected later this year.

¹³ Because of a lack of evidence linking health problems to long-term exposure to coarse particle pollution, EPA revoked the annual PM₁₀ standard on September 21, 2006. Source: BCAQMD 2007a; ARB 2007b

EXISTING AIR QUALITY—GREENHOUSE GASES AND LINKS TO GLOBAL CLIMATE

Change

Various gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth, not as high-frequency solar radiation, but lower frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate on Earth. Without the Greenhouse Effect, Earth would not be able to support life as we know it.

Prominent GHGs contributing to the Greenhouse Effect are carbon dioxide (CO₂), methane (CH₄), ozone, nitrous oxide, hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the Greenhouse Effect and have led to a trend of unnatural warming of the earth's climate, known as global climate change or global warming (Ahrens 2003). It is *extremely unlikely* that global climate change of the past 50 years can be explained without the contribution from human activities (Intergovernmental Panel on Climate Change [IPCC] 2007).

Climate change is a global problem. GHGs are global pollutants, unlike CAPs and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 54% is sequestered through ocean uptake, uptake by northern hemisphere forest regrowth, and other terrestrial sinks within a year, whereas the remaining 46% of human-caused CO₂ emissions remains stored in the atmosphere (Seinfeld and Pandis 1998).

Similarly, impacts of GHGs are borne globally, as opposed to localized air quality effects of CAPs and TACs. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice to say, the quantity is enormous, and no single project alone would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climate. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

Feedback Mechanisms and Uncertainty

Many complex mechanisms interact within Earth's energy budget to establish the global average temperature and global and regional climate conditions. For example, increases in atmospheric temperature would lead to increases in ocean temperature. As atmospheric and ocean temperatures increase, sea ice and glaciers are expected to melt, adding more fresh water to the ocean and altering salinity conditions. Both increases in ocean temperature and changes in salinity would be expected to lead to changes in circulation of ocean currents. Changes in current circulation would further alter ocean temperatures and alter terrestrial climates where currents have changed. Several interacting atmospheric, climatic, hydrologic, and terrestrial factors affecting global climate change are described below. These factors result in feedback mechanisms that could potentially increase or decrease the effects of global climate change. There is uncertainty about how some factors may affect global climate change because they have the potential to both intensify and neutralize future climate warming. Examples of these conditions are described below.

Direct and Indirect Aerosol Effects

Aerosols, including particulate matter, reflect sunlight back to space. As air quality goals for particulate matter are met and fewer emissions of particulate matter occur, the cooling effect of aerosols would be reduced, and the Greenhouse Effect would be further intensified. Similarly, aerosols act as cloud condensation nuclei, aiding in cloud formation and increasing cloud lifetime. Under some circumstances (see discussion of the cloud effect below), clouds efficiently reflect solar radiation back to space. With a reduction in emissions of particulate matter, including aerosols, the direct and indirect positive effect of aerosols on clouds would be reduced, potentially further amplifying the Greenhouse Effect.

The Cloud Effect

As global temperature rises, the ability of the air to hold moisture increases, facilitating cloud formation. As stated above, clouds can efficiently reflect solar radiation back to space. If an increase in cloud cover occurs at low or middle altitudes, resulting in clouds with greater liquid water content, such as stratus or cumulus clouds, more radiation would be reflected back to space than under current conditions. This would result in a negative feedback mechanism, in which the increase in cloud cover resulting from global climate change acts to balance the amount of further warming. If clouds form at higher altitudes in the form of cirrus clouds, however, these clouds allow more solar radiation to pass through than they reflect and ultimately act as GHGs themselves. This results in a positive feedback mechanism, in which the side effect of global climate change (an increase in cloud cover) acts to intensify the warming process. Because of the conflicting feedback mechanisms to which increasing cloud cover can contribute, this cloud effect is an area of relatively high uncertainty for scientists when projecting future global climate change conditions.

Other Feedback Mechanisms

As global temperature continues to rise, CH₄ gas trapped in permafrost is expected to be released into the atmosphere. As identified above in the description of CO₂ equivalents, CH₄ is approximately 23 times as efficient a GHG as CO₂; therefore, this release of CH₄ would accelerate and intensify global climate change if current trends continue. Additionally, as the surface area of polar and sea ice continues to diminish, Earth's albedo, or reflectivity, also is anticipated to decrease. More incoming solar radiation likely will be absorbed by the earth rather than be reflected back into space, further intensifying the Greenhouse Effect and associated global climate change. These and other both positive and negative feedback mechanisms are still being studied by the scientific community to better understand their potential effects on global climate change. The specific incremental increase in global average temperature that will result from the interaction of all the pertinent variables has not been pinpointed at this time. Although the amount and rate of increase in global average temperature are uncertain, there is no longer much debate within the scientific community that global climate change is occurring and that human-caused GHG emissions are contributing to this phenomenon.

ATTRIBUTING CLIMATE CHANGE—GREENHOUSE GAS EMISSION SOURCES

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission [CEC] 2006a). In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CEC 2006a). Emissions of CO₂ are byproducts of fossil fuel combustion. CH₄, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) is largely associated with agricultural practices and landfills. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution, respectively, two of the most common processes of CO₂ sequestration.

California is the 12th to 16th largest emitter of CO₂ in the world (CEC 2006a). California produced 499 million gross metric tons of CO₂ equivalent (CO₂e) in 2004 (ARB 2007a). CO₂e is a measurement used to account for the

fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the Greenhouse Effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, as described in Appendix C, “Calculation References,” of the General Reporting Protocol of the California Climate Action Registry (CCAR 2007), 1 ton of CH₄ has the same contribution to the Greenhouse Effect as approximately 23 tons of CO₂. Therefore, CH₄ is a much more potent GHG than CO₂. Expressing emissions in CO₂e takes the contributions of all GHG emissions to the Greenhouse Effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Combustion of fossil fuel in the transportation sector was the single largest source of California’s GHG emissions in 2004, accounting for 40.7% of total GHG emissions in the state (CEC 2006a). This sector was followed by the electric power sector (including both in-state and out-of-state sources) (22.2%) and the industrial sector (20.5%) (CEC 2006a).

ADAPTATION TO CLIMATE CHANGE

According to the IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature is expected to increase by 3–7°F by the end of the century, depending on future GHG emission scenarios (IPCC 2007). Resource areas other than air quality and atmospheric temperature could be indirectly affected by the accumulation of GHG emissions. For example, an increase in the global average temperature is expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state (including the project site). According to the California Energy Commission (2006b), the snowpack portion of the water supply could potentially decline by 30–90% by the end of the 21st century. A study cited in a report by the California Department of Water Resources (DWR) projects that approximately 50% of the statewide snowpack will be lost by the end of the century (Knowles and Cayan 2002). Although current forecasts are uncertain, it is evident that this phenomenon could lead to significant challenges in securing an adequate water supply for a growing population. An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events. This scenario would place more pressure on California’s levee/flood control system (DWR 2006).

Another outcome of global climate change is sea level rise. Sea level rose approximately 7 inches during the last century (CEC 2006b), and it is predicted to rise an additional 7–22 inches by 2100, depending on the future levels of GHG emissions (IPCC 2007). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion (especially a concern in the low-lying Sacramento–San Joaquin River Delta, where pumps delivering potable water could be threatened), and disruption of wetlands (CEC 2006b). As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable conditions are no longer available.

The project site is situated approximately 100 to 150 feet above mean sea level and, thus, would not be directly affected by the potential sea level rise predicted to occur over the next 100 years. However, the project area could experience increased flooding and associated displacement of residents and businesses due to rising sea levels.

4.6.2 REGULATORY SETTING

Air quality within Butte County is regulated by EPA, ARB, and BCAQMD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

U.S. Environmental Protection Agency

At the federal level, EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments made by Congress were in 1990.

The CAA required EPA to establish national ambient air quality standards (NAAQS). As shown in Table 4.6-2, EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5} and lead. The primary standards protect the public health and the secondary standards protect public welfare. The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA has responsibility to review all state SIPs to determine conformation to the mandates of the CAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a Federal Implementation Plan may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

In April 2007 the Supreme Court of the United States ruled that CO₂ is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions applicable to the proposed project.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Air Resources Board

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required ARB to establish California ambient air quality standards (CAAQS) (Table 4.6-2). ARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources, and provides districts with the authority to regulate indirect sources.

Other ARB responsibilities include, but are not limited to, overseeing local air district compliance with California and federal laws, approving local air quality plans, submitting SIPs to EPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels. There are 15 nonattainment areas for the national ozone standard and two nonattainment areas for the PM_{2.5} standard. The Ozone SIP and PM_{2.5} SIP must be adopted and sent to EPA by June 2007 and April 2008, respectively. The SIP must show how each area will attain the federal standards. To do this, the SIP will identify the amount of pollution emissions that must be reduced in each area to meet the standard and the emission controls needed to reduce the necessary emissions.

ARB and local air pollution control districts are currently developing plans for meeting new national air quality standards for ozone and PM_{2.5}. The Draft Statewide Air Quality Plan was released in April 2007 (ARB 2007).

Airborne Toxic Control Measures (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling

As part of its diesel risk reduction plan, ARB has developed an air toxic control measure that limits stationary idling by diesel-fueled commercial trucks to 5 minutes (13 CCR Chapter 10 Section 2485).

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 requires that ARB develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state.”

To meet the requirements of AB 1493, in 2004 ARB approved amendments to the California Code of Regulations (CCR) adding GHG emissions standards to California’s existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1) require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. Emissions requirements adopted as part of 13 CCR 1961.1 are shown in Table 4.6-3. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for the 2016 model year are approximately 37% lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks with LVW of 3,751 pounds to gross vehicle weight (GVW) of 8,500 pounds, as well as medium-duty passenger vehicles, GHG emissions are reduced approximately 24% between 2009 and 2016.

**Table 4.6-3
Fleet-Average Greenhouse Gas Exhaust Emission Limits Included in CCR 13 1961.1**

Vehicle Model Year	Fleet-Average Greenhouse Gas Emissions (carbon dioxide equivalents in grams per mile)	
	Light-Duty Trucks 0–3,750 Pounds LVW and Passenger Cars	Light-Duty Trucks 3,751 Pounds LVW to 8,500 Pounds GVW and Medium-Duty Passenger Vehicles*
2009	323	439
2010	301	420
2011	267	390
2012	233	361
2013	227	355
2014	222	350
2015	213	341
2016	205	332

Notes:

GVW = gross vehicle weight.

LVW = loaded vehicle weight.

* Specific characteristics of passenger cars, light-duty trucks, and medium-duty passenger vehicles are provided in Title 13, Section 1900 of the California Code of Regulations as amended to comply with Assembly Bill 1493.

Source: California Code of Regulations, Title 13, Section 1961.1

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of 13 CCR Sections 1900 and 1961 as amended by AB 1493 and 13 CCR 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al.*). The suit, still in process in the U.S. District Court for the Eastern District of California, contends that California's implementation of regulations that, in effect, regulate vehicle fuel economy violates various federal laws, regulations, and policies. To date, the suit has not been settled, and the judge has issued an injunction stating that ARB cannot enforce the regulations in question before receiving appropriate authorization from EPA.

In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the Supreme Court case, *Massachusetts, et al., v. Environmental Protection Agency, et al.*, the primary issue in question was whether the federal Clean Air Act (CAA) provides authority for EPA to regulate CO₂ emissions. EPA contended that the CAA does not authorize regulation of CO₂ emissions, whereas Massachusetts and 10 other states, including California, sued EPA to begin regulating CO₂. The U.S. Supreme Court ruled on April 2, 2007, that GHGs are "air pollutants" as defined under the federal Clean Air Act and EPA is granted authority to regulate CO₂ (*Massachusetts v. U.S. Environmental Protection Agency* [2007] 549 U.S. 05-1120). After this decision, the U.S. District Court for the Eastern District of California was then willing to hear arguments by automobile manufacturers about the legality of AB 1493. On December 12, 2007, the Court rejected the automakers claim and ruled that if California receives appropriate authorization from EPA (the last remaining factor in enforcing the standard), these regulations would not be consistent with federal law.

Since the request was made in 2005, EPA has failed to act on granting California authorization to implement the standards. EPA rejected the California's request for a waiver in December 2007 and Governor Schwarzenegger and Attorney General Brown have filed suit against the EPA for this decision.

Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050.

The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary will also submit biannual reports to the governor and state legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California's resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created the California Climate Action Team (CCAT) made up of members from various state agencies and commission. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32, the California Climate Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies

that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

AB 32 does not explicitly apply to emissions from land development, though emissions associated with land development projects are closely connected to the utilities, transportation, and commercial end-use sectors. Further, because AB 32 imposes a statewide emissions cap, land development-related emissions will ultimately factor in to considerations of GHG emissions in the state.

Senate Bills 1771 and 527 and the California Climate Action Registry

The California Climate Action Registry (CCAR) was established in 2001 by Senate Bills 1771 and 527 as a nonprofit voluntary registry for GHG emissions. The purpose of CCAR is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emissions reduction requirements may be applied. CCAR has developed a general protocol and additional industry-specific protocols that provide guidance on how to inventory GHG emissions for participation in the registry.

Senate Bill 1368

SB 1368 is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 requires the California Public Utilities Commission (PUC) to establish a GHG emission performance standard for baseload generation from investor owned utilities by February 1, 2007. The California Energy Commission (CEC) must establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the PUC and CEC.

Senate Bill 97

Senate Bill (SB) 97, signed August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the State Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA by July 1, 2009. The Resources Agency is required to certify or adopt those guidelines by January 1, 2010. This bill also removes inadequate CEQA analysis of effects of GHG emissions from projects (retroactive and future) funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E) as a legitimate cause of action. This provision will be repealed on January 1, 2010, wherein inadequate CEQA analysis for those projects could then become a legitimate cause of action. This bill would only protect a handful of public agencies from CEQA challenges on certain types of projects for a few years time.

LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Butte County Air Quality Management District

BCAQMD is the primary local agency responsible for protecting the people and the environment of Butte County from the effects of air pollution. BCAQMD is responsible for adopting rules that limit pollution, issuing permits

to ensure compliance, and inspecting pollution sources. BCAQMD also monitors air quality in the county and prepares plans to demonstrate how compliance with state and federal standards would be attained and maintained.

Air Quality Plans

Federal and State air quality laws also require regions designated as nonattainment to prepare plans that demonstrate how the region will attain the pollutant standard. Air quality planning in the Northern Sacramento Valley Air Basin has been undertaken on a joint basis by the air districts in seven counties, including Butte County. The current plan, the 2003 Air Quality Attainment Plan, is an update of plans prepared in 1994, 1997, and 2000. The purpose of the plan is to achieve and maintain healthful air quality throughout the air basin. The 2003 Air Quality Attainment Plan addresses the progress made in implementing the 2000 plan and proposes modifications to the strategies necessary to attain the California ambient air quality standard for the 1-hour ozone standard at the earliest practicable date. BCAQMD has current air quality plans for ozone and PM₁₀.

Fugitive Dust Mitigation Measures

For all dust-generating activities, BCAQMD requires implementation of all applicable fugitive dust control measures, as listed in its Compliance Advisory Bulletin (BCAQMD 2007b), for projects that emit fugitive dust during land development activities.

General Prohibitions and Exemptions on Open Burning (Rule 300)

BCAQMD Rule 300 prohibits the use of outdoor open fires. Part 2.10 of the rule exempts open outdoor fires used for cooking food for human beings from the burn prohibition rule.

“Don’t Light Tonight” Program

“Don’t Light Tonight” is a voluntary program during the fall and winter in which BCAQMD asks residents not to use their woodstoves and fireplaces when air pollution approaches unhealthy levels (BCAQMD 2007c). The program is aimed at keeping pollution levels of particulate matter below the health-based standards. The season begins in mid-November and extends through February.

Butte County Fire Rescue/California Department of Forestry and Fire Protection

The responsible fire protection agency for the unincorporated areas of Butte County is Butte County Fire Rescue/California Department of Forestry and Fire Protection (~~Cal Fire~~CAL FIRE) (Butte County Fire Rescue 2007). ~~Cal Fire~~CAL FIRE imposes a burn ban during the wildfire season, which typically begins around July 1 and extends through October 31. Burn-ban periods established by ~~Cal Fire~~CAL FIRE apply to all vegetative and wood burning, including campfires and other burning activities on state land inside Butte County, with no exceptions made by on BCAQMD Rule 300, part 2.10 (Williams, pers. comm., 2007). Information about burn bans imposed by ~~Cal Fire~~CAL FIRE is posted on BCAQMD’s web site as a public service.

Butte County General Plan

There is no air quality element in the existing Butte County General Plan. Butte County is currently developing a draft Air Quality Element for its ongoing update of the County General Plan; however, the draft Air Quality Element has not yet been approved by the County Board of Supervisors and, therefore, is not available to the public.

4.6.3 ENVIRONMENTAL IMPACTS

METHOD OF ANALYSIS

Emissions of short-term construction-related and long-term operation-related (i.e., regional and local) criteria air pollutants and precursors, odors, and TACs were assessed in accordance with the *Indirect Source Review Guidelines* published by BCAQMD (BCAQMD 1997) and consultation with BCAQMD staff.

Project-generated, restoration- and construction-related emissions of criteria air pollutants (e.g., PM₁₀) and precursors (i.e., ROG and NO_x) were assessed in accordance with BCAQMD-recommended methods. Where quantification was required, emissions were modeled using the URBEMIS 2007 Version 9.2.2 computer model (ARB 2007e). Modeled restoration- and construction-related emissions were compared with applicable BCAQMD action levels to determine whether mitigation would be required.

Project-generated, operation-related (i.e., regional) emissions of criteria air pollutants and precursors (e.g., mobile- and area-sources) were also quantified using the URBEMIS 2007 Version 9.2.2 computer model (ARB 2007e). Modeling was based on project-specific data (e.g., size and type of proposed uses) and assumptions about vehicle trips associated with the proposed project, as outlined in Appendix F.

At this time, BCAQMD has not adopted a methodology for analyzing short-term construction-related emissions of TACs. Therefore, restoration- and construction-related emissions of TACs were assessed in a qualitative manner.

To date, BCAQMD has not adopted a method for evaluating impacts associated with emissions of PM_{2.5}. However, because project-generated, construction- and operation-related emissions of PM_{2.5}, by definition, would be a subset of PM₁₀ emissions, BCAQMD-recommended methodologies and mitigation measures for PM₁₀ would also be relevant to emissions of PM_{2.5}.

Project-generated emissions of GHGs would predominantly be in the form of CO₂. While emissions of other GHGs, such as methane, are important with respect to global climate change, the project is not expected to emit significant quantities of GHGs other than CO₂. The reason for this conclusion is that most emissions from the project are associated with campfire burning and vehicular emissions. Though vehicles also emit small quantities of N₂O and CH₄, the primary GHG emitted during fuel combustion is CO₂. Thus, project-generated emissions of CO₂ were used as a proxy for total emissions GHGs. Operational CO₂ emissions were quantified using the URBEMIS 2007 Version 9.2.2 computer model (ARB 2007e). Indirect emissions of CO₂ associated with electricity consumption were addressed in a qualitative manner.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, an air quality impact is considered significant if implementation of the proposed project would do any of the following:

- ▶ conflict with or obstruct implementation of the applicable air quality plan,
- ▶ violate any air quality standard or contribute substantially to an existing or projected air quality violation,
- ▶ result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable NAAQS or CAAQS (including releasing emissions which exceed quantitative thresholds for ozone precursors),
- ▶ expose sensitive receptors to substantial pollutant concentrations, or
- ▶ create objectionable odors affecting a substantial number of people.

As stated in Appendix G, the significance of criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. BCAQMD's *Indirect Source Review Guidelines* (BCAQMD 1997) include tiered "action-levels" for recommending whether standard and/or best available mitigation measures should be implemented. The action-level thresholds are consistent with the New Source Review requirements for permitting stationary sources that have been adopted by BCAQMD, as well as other air quality management districts in the NSVAB. The action-level thresholds illustrate the extent of indirect source impacts resulting from projects, and are a basis for determining the need to apply mitigation. They are intended for use as a guide rather than strict, absolute values. The three action levels and associated mitigation measures are summarized below:

- ▶ Level A: Indirect sources which have the potential to emit less than 25 pounds per day (lb/day) of ROG or NO_x, or less than 80 lb/day of PM₁₀, would be subject to the recommended list of standard mitigation measure.
- ▶ Level B: Indirect sources which have the potential to emit 25 lb/day of ROG or NO_x, or 80 lb/day of PM₁₀, or any nonattainment criteria pollutant would select as many supplemental mitigation measures as are feasible, in addition to the recommended list of standard mitigation measures.
- ▶ Level C: Indirect sources which have the potential to emit 137 lb/day or greater (25 tons per year) of ROG or NO_x, PM₁₀, or any nonattainment criteria pollutant would select as many supplemental mitigation measures as are feasible, in addition to the recommended list of standard mitigation measures. Depending on factors specific to the project, an environmental impact report may also be necessary under CEQA.

Thus, a project would have a significant impact on air quality if it would generate emissions that exceed any of the above action levels and does not incorporate all applicable BCAQMD-recommended mitigation, or if a project generates emissions that exceed the Level C action levels despite implementation of all feasible mitigation. In all cases, developers would be required to coordinate with the Planning Agencies to identify feasible mitigation measures.

In addition, the following thresholds of significance have been used to determine whether implementation of the proposed project would result in significant impacts with respect to global climate change. A global climate change impact is considered significant if implementation of the proposed project under consideration would do any of the following:

- ▶ Conflict with or obstruct state or local policies or ordinances established for the purpose of reducing GHG emissions, or
- ▶ Result in a considerable net increase in GHGs.

With regard to emissions of GHGs, no air district in California, including the BCAQMD, has identified a significance threshold for analyzing project-generated emissions or a methodology for analyzing air quality impacts related to global warming. Nonetheless, by adoption of AB 32, California has identified that global climate change is a serious environmental issue, and has identified GHG reduction goals.

To meet AB 32 goals, California as a whole will ultimately need to generate substantially less GHG than current levels. It is recognized, however, that for most projects there is no simple metric available to determine if a single project would substantially increase or decrease overall emission levels of GHGs.

While AB 32 focuses on stationary sources of emissions, the primary objective of AB 32 is to reduce California's contribution to global warming by reducing California's total annual production emissions. The impact that emissions of GHGs have on global climate change is not dependent on whether they were generated by stationary, mobile, or area sources; or whether they were generated in one region or another. Thus, the net change in total

levels of GHGs generated by a project or activity is the best metric for determining whether the proposed project would contribute to global warming.

The effect of GHG emissions as they relate to global climate change is inherently a cumulative impact issue. While the emissions of one single project will not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. In the case of the proposed project, if the size of the increase in emissions from the project is considered to be substantial, then the impact of the project would be cumulatively considerable.

4.6.4 IMPACT ANALYSIS

IMPACT 4.6-a **Generation of Short-Term Restoration- and Construction-Related Emissions of Criteria Air Pollutants and Precursors.** *Project-generated, restoration-related emissions levels of criteria air pollutants and precursors would not be substantially different from those currently generated by existing on-site orchard operations. However, emissions of ROG and PM₁₀ associated with the construction of the campground and ~~new relocation of the~~ park headquarters would exceed associated BCAQMD trigger levels for incorporating applicable recommended emission reduction measures. Because applicable BCAQMD-recommended mitigation measures are not currently incorporated into the project description, this impact would be significant.*

The proposed project would include the restoration of approximately ~~150~~156 acres of agricultural land to native riparian habitat, new campgrounds, day use facilities, and conversion of existing farm buildings on the Nicolaus parcel to the new headquarters of BSRSP. Habitat restoration would occur over an approximate 4-year period and include the removal of orchard trees with heavy equipment, discing of soils, irrigation system maintenance, spraying of herbicides for weed control, hauling of supplies to the site, and commute trips by restoration workers. Project-generated, restoration-related activities, and their associated emissions levels, would be not be substantially different from those that currently occur from existing on-site operations of walnut and almond orchards. For example, discing of soils performed before the planting of native species during restoration would generate levels of fugitive PM₁₀ dust emissions similar to those from the activity of “clean-tilling” the orchard floor (i.e., discing, dragging, and rolling) before mechanical harvesting of the orchard trees. In addition, because restoration activities would involve equipment similar to those used under existing orchard maintenance, project-generated exhaust emissions of ozone precursors, ROG and NO_x, would not substantially differ from those that currently occur on-site.

However, short-term emissions would also be generated by construction of the campground and conversion of the existing farm buildings on the Nicolaus parcel to the new park headquarters. Construction of the proposed project would temporarily generate emissions of ROG, NO_x, and PM₁₀ from site grading and excavation; motor vehicle exhaust associated with construction equipment, employee commute trips, and material transport; application of architectural coatings; paving; and other construction operations. Site grading would generally occur in the first phase of construction before other activities begin. Other construction activities, such as paving, building construction, and application of architectural coatings, would then follow. No soil would be imported or removed from the site, though removed orchard trees may be hauled to an off-site location. New emissions associated with these construction activities were estimated using the ARB-approved URBEMIS 2007 Version 9.2.2 computer program (ARB 2007e). URBEMIS is designed to model construction emissions for land use development projects and allows for the input of specific project information. ~~It is~~The model assumed that construction would begin in the spring of 2008 and would be completed in approximately three months. The estimation of daily construction emissions is presented in Table 4.6-4.

The BCAQMD has established tiered “action-levels” for recommending whether standard and/or best available mitigation measures should be implemented. Various mitigation measures are recommended for proposed projects based whether they exceed Level A, Level B, or Level C Action Triggers. As shown in Table 4.6-4, the maximum daily ROG emissions during project construction would not exceed BCAQMD’s Level B trigger level for ROG of

**Table 4.6-4
Summary of Modeled Project-Generated, Construction-Related Emissions
of Criteria Air Pollutants and Precursors**

Source	Emissions (lb/day) ¹			
	ROG	NO _x	PM ₁₀	PM _{2.5} ²
Phase 1: Grading³				
Fugitive Dust	—	—	120.0	25.1
Off-Road Diesel Exhaust	4.6	37.7	2.0	1.9
Worker Trips	0.1	0.1	0.0	0.0
Subtotal Unmitigated	4.7	37.9	122.0	26.9
Phase 2: Paving				
Off-Gas Emissions	2.1	0.0	0.0	0.0
Off-Road Diesel Exhaust	2.8	16.4	1.4	1.3
On-Road Diesel Exhaust	0.5	7.4	0.3	0.3
Worker Trips	0.1	0.2	0.0	0.0
Subtotal Unmitigated	5.5	24.0	1.8	1.6
Phase 3: Building Construction				
Off-Road Diesel Exhaust	4.1	18.2	1.3	1.2
Vendor Trips	0.0	0.1	0.0	0.0
Worker Trips	3.0	5.8	0.7	0.4
Subtotal Unmitigated	7.1	24.2	2.0	1.6
Phase 4: Architectural Coatings				
Off-Gas Emissions	9.7	0.0	0.0	0.0
Worker Trips	0.0	0.0	0.0	0.0
Subtotal Unmitigated	9.7	0.0	0.0	0.0
Maximum Daily Emissions, Unmitigated	9.7	37.9	122.0	26.9
Notes: See Appendix F for detailed assumptions, input parameters, and modeling results.				
¹ All emission estimates assume a worst-case scenario in which the construction of the campgrounds and new relocation of the park headquarters would occur simultaneously. However, it is expected that these construction activities would occur at separate times.				
² Estimated PM _{2.5} emissions are shown for informational purposes only. BCAQMD has not identified mass emissions thresholds for emissions of PM _{2.5} .				
³ Additional emissions would be generated if removed orchard trees are hauled to an off-site location such as the wood waste-to-energy power facility operated by Pacific Oroville Power, Inc. in conjunction with NorCal Waste Systems in Oroville, CA. These emissions would not be substantial because the hauling would be performed by on-road haul trucks and the site is relatively close proximity to the Oroville facility.				
Sources: Modeling performed by EDAW 2007.				

25 lb/day. However, the maximum daily NO_x emissions of 37.9 lb/day, which would occur during site grading, would exceed the Level B trigger level for NO_x of 25 lb/day. Due to this exceedance, BCAQMD recommends implementation of all standard and best available mitigation measures applicable to the project. Additionally, grading activities associated with building construction would emit approximately 122.0 lb/day of PM₁₀, which exceeds BCAQMD's Level B trigger level for PM₁₀ of 25 lb/day, as shown in Table 4.6-4, and additional PM₁₀ fugitive dust would also be generated by earth disturbance during restoration activities. For all dust-generating activities, BCAQMD requires implementation of all applicable fugitive dust control measures, as listed in its Compliance Advisory Bulletin (BCAQMD 2007b), for projects that emit fugitive dust during land development

activities. Without implementation of all applicable BCAQMD-recommended mitigation measures during site restoration and construction of the campgrounds and ~~new-relocation of the~~ park headquarters, project emissions would be considered a **significant** impact.

IMPACT 4.6-b **Generation of Long-Term Operation-Related (Regional) Emissions of Criteria Air Pollutants and Precursor Emissions.** *Operation of the proposed campgrounds, relocated headquarters, and ~~new~~ day-use facilities would result in project-generated emissions of PM₁₀ that exceed BCAQMD's "Level B" trigger level of 80 lb/day and emissions of ROG that exceed BCAQMD's "Level C" action-level threshold of 137 lb/day (refer to Table 4.6-5). Thus, project-generated, operation-related emissions of criteria air pollutants and precursors could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the nonattainment status of Butte County. In addition, project-generated emissions could also conflict with air quality planning efforts. As a result, this would be a **significant** impact.*

**Table 4.6-5
Summary of Modeled Project-Generated, Operation-Related Emissions
of Criteria Air Pollutants and Precursors**

Source	Emissions (lb/day) ¹			
	ROG	NO _x	PM ₁₀	PM _{2.5} ⁸
Area Source²				
Campfires ³	440.5	5.0	66.6	64.1
Natural Gas ⁴	0.0	0.2	0.0	0.0
Landscaping	1.0	0.1	0.0	0.0
Architectural Coatings	0.1	0.0	0.0	0.0
Mobile Source⁵				
Campgrounds ⁶	10.7	14.0	13.6	2.6
Headquarters and Day Uses ⁷	2.2	2.7	2.5	0.5
Total Net Unmitigated	454.4	22.0	82.6	67.2

¹ Emissions were modeled using the URBEMIS 2007 Version 9.2.2 computer model (ARB 2007e).
² Area-source emission estimates do not include emissions from consumer products (e.g., air fresheners, household cleaners, personal care products) because new emissions from with these sources are primarily associated with increased population related to residential development (ARB 1990). In addition, area-source emission estimates do not include emissions from the potential use of charcoal lighter fluid and camping fuel at the campgrounds, which would be expected to be nominal relative to overall operational emissions.
³ A conservative estimate of maximum daily campfire emissions was generated using the default emission rates in the open hearth module of URBEMIS and assumptions about the amount of wood burned per day in each of 55 fire rings at the proposed campsites (see Appendix F for assumptions). It is unknown whether the campfires would represent a net increase compared to emissions from biomass burning that is currently part of the existing orchard operations.
⁴ Emissions from natural gas consumption would be associated with water heating for the restroom and shower buildings at the campgrounds, and space and water heating at the ~~new-relocated~~ park headquarters.
⁵ ~~Worst-case maximum~~ Maximum daily mobile-source emissions were estimated assuming the campgrounds, ~~new-relocated~~ headquarters, and day use facilities would be operating at full capacity during a summer day, using default trip lengths for rural trips. The default fleet mix was adjusted to account for RV use at each RV camp site and limited trips by commercial-sized trucks. However, it should be noted that the RV campgrounds have been removed from the recreation facilities plans.
⁶ A trip generation rate of 4.0 trips per day was assumed for each campsite.
⁷ Assumptions regarding peak operations of the ~~new-relocated~~ park headquarters, campgrounds, and day use facilities generated an estimation that these facilities would generate a combined 210 trips per day.
⁸ The BCAQMD has not identified mass emissions thresholds for operational emissions of PM_{2.5}.
 See Appendix F for detailed assumptions, input parameters, and modeling results.
 Sources: Modeling performed by EDAW 2007

Project-generated, regional area- and mobile-source emissions of ROG, NO_x, PM₁₀, and PM_{2.5} were also estimated using URBEMIS 2007 Version 9.2.2 computer program (ARB 2007e), which is designed to model operational emissions for land use development projects. URBEMIS allows land use selections that include project location and vehicle trip parameters (e.g., trip generation rates, fleet mix). URBEMIS accounts for area-source emissions from the usage of natural gas, wood burning, and landscape maintenance equipment, and mobile-source emissions associated with vehicle trips. Regional area- and mobile-source emissions were estimated based on the proposed land uses type identified in Chapter 3, "Project Description," the estimated increase in vehicle trips generated by the proposed project (presented in Appendix F) and default model settings for conditions in the NSVAB in the earliest year when the project would become completely operational, 2009. Results of the URBEMIS modeling are shown in Table 4.6-5. Refer to Appendix F for detailed assumptions, modeling input parameters, and modeling results.

During the peak camping season, unmitigated long-term regional emissions would reach 454.4 lb/day of ROG, 22.0 lb/day of NO_x, and 82.6 lb/day of PM₁₀, and 67.2 lb/day of PM_{2.5}. As shown in Table 4.6-5, campfires would generate most of the emissions of ROG, PM₁₀, and PM_{2.5} while most of the NO_x emissions would be generated by vehicle travel associated with park operations.

Based on the modeling conducted, operation-related activities would result in project-generated emissions of PM₁₀ that exceed BCAQMD's "Level B" action-level threshold of 80 lb/day. In addition, project-generated emissions of ROG would exceed BCAQMD's "Level C" action-level threshold of 137 lb/day. While wood burning activities at the campgrounds would be the predominant source of operational emissions (as shown in Table 4.6-5), it is uncertain whether the project would result in a net increase in ROG and PM₁₀ emissions because biomass burning is practiced under the existing operations at the walnut and almond orchards. Vegetative debris is typically piled and burned on site after regular pruning of orchard trees. Thus, the net change in burning-related emissions would depend on the amount of burning that currently takes place at the project site orchards and the actual amount of burning that would take place in the approximately 55 campfire rings. Nonetheless, campfire emissions along with other project-generated, operation-related emissions of criteria air pollutants and precursors could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the nonattainment status of Butte County for PM₁₀. Also, project-generated emissions could potentially conflict with current air quality planning efforts. As a result, this would be a **significant** impact.

It should be noted that, in response to comments on the Draft EIR, the RV campgrounds were removed from the recreation facilities plans (Appendix D). This EIR analysis of long-term operation-related emissions of criteria air pollutants and precursor emissions included RV trips, making the analysis very conservative. With removal of the RV campground, the number of vehicle trips on River Road would be reduced, which would in-turn reduce long-term operation-related emissions. However, because project-generated emissions could still potentially conflict with current air quality planning (due to other vehicle trips and burning activities at the campgrounds), this impact is still considered to be significant.

It is also important to note that project implementation would ~~also~~ result in emissions of CO due to mobile-sources (vehicles). However, because CO disperses rapidly with increased distance from the source, emissions of CO are considered localized pollutants of concern rather than of regional concern and are discussed separately, below.

IMPACT **Local Mobile-Source Carbon Monoxide Emissions.** *The proposed project would not result in, or contribute to, congestion on nearby roadways or at nearby intersections and, as such, would not result in or contribute to CO concentrations that exceed the California 1-hour CO ambient air quality standard of 20 parts per million (ppm) or the 8-hour CO ambient air quality standard of 9 ppm. As a result, this would be considered a less-than-significant impact.*

4.6-c

The proposed project would not result in, or contribute to, congestion on nearby roadways or at nearby intersections and, as such, would not result in or contribute to CO concentrations that exceed the California 1-hour CO ambient air quality standard of 20 ppm or the 8-hour CO ambient air quality standard of 9 ppm. CO emissions are a direct function of vehicle idling time and, thus, traffic flow conditions. Under specific meteorological conditions, the concentration of CO emissions near congested roadways and/or intersections may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. A detailed traffic analysis was not prepared for this study. However, high levels of traffic congestion do not currently occur on nearby roads or at intersections in the project area, which is rural in nature. Additionally, vehicle trips generated by the proposed project are not expected to be concentrated during any particular time of day such that they would result in congested roadways or intersections during peak periods. Furthermore, in response to comments on the Draft EIR, the RV campgrounds were removed from the recreation facilities plans (Appendix D), which would reduce the number of vehicle trips on River Road. Thus, the proposed project would not be expected to result in or contribute to CO concentrations that exceed the California 1-hour CO ambient air quality standard of 20 ppm or the 8-hour CO ambient air quality standard of 9 ppm.

IMPACT 4.6-d **Odor Emissions.** *Odorous diesel exhaust emissions from on-site construction and restoration equipment would be temporary and intermittent in nature and dissipate rapidly from the source. Also, the proposed project would not include the long-term operation of an odorous emission source. Odorous emissions may occur when the RV dump station vault toilets are serviced (i.e., biosolids removed); however, pumping of the RV dump station vault toilets would be performed on an infrequent basis and the dump station vault toilets would not be located in close proximity to off-site sensitive receptors. Thus, the project would not create objectionable odors affecting a substantial number of people. This impact would be less than significant.*

The project site currently consists of undeveloped orchards with no buildings or sensitive receptors on-site. The nearest off-site sensitive receptors to the project site is the farmhouse located 400 feet north of the Nicolaus property's northern boundary and 1,200 feet east of the Singh property. The exposure of sensitive receptors to odors from project construction and operation are discussed separately below.

Short-Term Construction-Related Odor Emissions

The predominant source of power for construction equipment is diesel engines. Exhaust odors from diesel engines, as well as emissions associated with paving and the application of architectural coatings may be considered offensive to some individuals. However, because odors would be temporary and would disperse rapidly with distance from the source, construction-generated odors would not result in the frequent exposure of area receptors to objectionable odor emissions. This would particularly be the case because the closest off-site sensitive receptor is the farm house located 400 feet from the Nicolaus property.

Long-Term Operation-Related Odor Emissions

The daily operations of campgrounds and state park recreational uses are typically not considered a major odor source. ~~Exhaust fumes associated with the use of individual generators at the RV campsite would not be generated because every RV site would have its own electrical pedestal.~~ Emissions of odorous compounds may be released during the pumping of the ~~RV dump station vault toilets near the RV campground.~~ However, this maintenance activity would occur infrequently and the ~~dump station vault toilets~~ would be located near the relocated BSRSP headquarters (the Nicolaus farm complex) and campsites, which ~~is~~ are approximately 1,800 feet from the nearest off-site sensitive receptor. As a result, this impact would be **less than significant**.

IMPACT 4.6-e **Toxic Air Contaminant Emissions.** *The proposed project would not be a source of TAC emissions, and there are no sources of TAC emissions near the project site; therefore, the project would not result in the exposure of sensitive receptors to TAC emissions that exceed recommended thresholds. This would be considered a less-than-significant impact.*

The potential for exposure of sensitive receptors to toxic air emissions from the use of equipment during short-term restoration and construction activities, stationary sources, and on- and off-site mobile sources are discussed separately below.

Short-Term Mobile-Source TAC Emissions during Restoration and Construction

Restoration and construction activities proposed by the project would result in diesel exhaust emissions from on-site heavy-duty equipment. Particulate exhaust emissions from diesel-fueled engines (diesel PM) were identified as a TAC by ARB in 1998. Proposed restoration and construction activities would generate diesel PM emissions from the use of off-road diesel equipment required for site grading and earth movement, paving, and other construction activities. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (Salinas, pers. comm., 2004). Thus, the estimated 4-year duration of proposed restoration and construction activities would only constitute approximately 6% of the total exposure period. Because the use of mobilized equipment would be temporary and there are no sensitive receptors located in close proximity to the project site, diesel PM from restoration and construction activities would not be anticipated to result in the exposure of sensitive receptors to levels that exceed the applicable standards.

Long-Term Operational TAC Emissions

The proposed project consists of the expansion of an existing state park for the restoration of orchards to native habitat and the long-term operation of a new campground. Campgrounds and state parks do not typically draw a considerable number of diesel-fueled vehicles and are not considered a source of TACs. In addition, there are no sensitive receptors located in close proximity to the project site.

Furthermore, there are no major stationary sources of TACs (e.g., industry) or mobile sources of TACs (e.g., freeways, railyards) in the vicinity of the project site. Pursuant to BCAQMD Rule 400, all stationary sources having the potential to emit TACs are required to obtain permits. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including BCAQMD Rule 401. Given that compliance with applicable standards is required for the development and operation of facilities that may emit TACs, the TAC emissions at the project site are expected to be within established standards. Therefore, this would be considered a *less-than-significant* impact.

IMPACT **Greenhouse Gas Emissions.** *While the project could potentially result in a net increase or decrease in GHG emissions, the size of the change would be considered nominal. Nonetheless, if the project contributed a net increase in GHG emissions, the amount would be less than considerable. This impact would be **less than significant**.*

4.6-f

No air district or other regulatory agency in California has identified a significance threshold for (GHG emissions generated by a proposed project, or a methodology for analyzing impacts related to GHG emissions or global climate change. By adoption of AB 32 and SB 97; however, the State of California has established GHG reduction targets and has determined that GHG emissions as they relate to global climate change are a source of adverse environmental impacts in California. AB 32, California Climate Solutions Act of 2006 (See Statutes 2006, Chapter 488, enacting Health & Safety Code, Sections 38500–38599), establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. Although AB 32 did not amend CEQA, the legislation does include language identifying the various

environmental problems in California caused by global warming (Health & Safety Code, Section 38501[a]). SB 97, however, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA and requires the Governor's Office of Planning and Research to prepare State CEQA Guidelines revisions addressing the mitigation of GHGs or their consequences (Statutes 2007, Chapter 185 enacting Public Resources Code Sections 21083.05 and 21097).

The proper context for addressing the issue in a CEQA document is the discussion of cumulative impacts, since while the emissions of one single project would not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact concerning global climate change. To meet GHG emission targets of AB 32, California would need to generate less GHG emissions than current levels. It is recognized, however, that for most projects no simple metric is available to determine if a single project would substantially increase or decrease overall GHG emission levels or conflict with the goals of AB 32.

The text of AB 32 strongly suggests that when ARB interprets and applies the definition of "Greenhouse gas emission source," the regulations issued under the legislation will apply primarily, if not exclusively, to stationary sources of GHG emissions (see Health & Safety Code, Section 38505[i]). However, this mandate demonstrates California's commitment to reducing the rate of GHG emissions and the state's associated contribution to climate change. It does not intend to limit economic or population growth. While the text of AB 32 focuses on major stationary and area sources of GHG emissions, the primary objective of AB 32 is to reduce California's contribution to global climate change by reducing California's total annual production of GHG emissions. The impact that GHG emissions have on global climate change does not depend on whether the emissions were generated by stationary, mobile, or area sources, or whether they were generated in one region or another. Thus, consistency with the state's requirements for GHG emissions reductions is the best metric for determining whether the proposed project would contribute to global warming. In the case of the proposed project, if the project substantially impairs the state's ability to conform with the mandate to reduce GHG emissions to 1990 levels by the year 2020, then the impact of the project would be cumulatively considerable (i.e., significant).

GHG emissions generated during construction and operation of the proposed project would predominantly be in the form of CO₂. In comparison to criteria air pollutants, such as ozone and PM₁₀, CO₂ and other GHG emissions persist in the atmosphere for a much longer period of time. GHG sources associated with restoration and construction activities of the project would include the operation of off-road construction equipment, worker vehicle trips, and trips by haul trucks bringing materials to the sites. While GHG emissions generated by these restoration and construction activities may be considered new, they would be temporary in nature and would not be considered substantial given the project's small size. Also, it would be speculative to determine whether GHG emissions associated with the restoration of ~~470~~156 acres of orchard to native habitat would be lesser or greater than the GHG emissions generated by continued operation of the existing walnut and almond orchards. In addition, while removal of the orchards would result in a reduction in carbon-sequestering trees, new plantings would be cultivated that would also provide the benefit of carbon sequestration.

New long-term operational-GHG emissions associated with operation of the expanded Bidwell-Sacramento River State Park would be generated by vehicle trips by park visitors and campfires at the new park campground. No stationary sources of GHG emissions would be associated with the project. Based on the same URBEMIS modeling used to estimate criteria air pollutant and precursor emissions (as summarized in Table 4.6-2) and additional assumptions about projected seasonal use patterns of the park, vehicle trips and campfires would generate approximately 670 and 470 tons of CO₂ per year, respectively. Additional, indirect-source GHG emissions would also be generated from the consumption of electricity at the campgrounds and ~~new-relocated~~ park headquarters. (It should be noted that, in response to comments on the Draft EIR, the RV campgrounds were removed from the recreation facilities plans [Appendix D]. This EIR analysis of long-term operational-GHG emissions included RV trips, making the analysis of mobile source emissions very conservative. With removal of the RV campground, the number of vehicle trips on River Road would be reduced, which would in-turn reduce long-term operation-related emissions.)

For a number of reasons, it would be too speculative to determine whether the total operational GHG emissions generated by the proposed project would be new emissions. For example, if the new campground and expanded park were not developed, it is unknown whether visitors using the park's new facilities would have otherwise sought similar recreational opportunities at other existing parks in the region. Also, if the same individuals would be using other parks, it is unknown whether they would be traveling to more-distant recreation areas, resulting in increased vehicle-miles traveled and associated GHG emissions. It is conceivable that the expansion of Bidwell-Sacramento River State Park could reduce recreational-related vehicle-miles traveled given that it is less than 8 miles from Chico, a major population center in the region. Presently the closest recreational areas to Chico are at Woodson Bridge State Recreation Area, located 22 miles away, and around Lake Oroville, which is more than 25 miles away. Furthermore, it is unknown whether long-term GHG emissions associated with the proposed campground and ~~expanded~~ day-use facilities would be substantially different than the level of GHG emissions that would be generated by the continued cultivation of the existing walnut and almond orchards. Thus, it is indeterminate whether the long-term net change in GHG emissions associated with the proposed project would be an increase or decrease. Nonetheless, the quantity of the net change would be considered nominal because the project would not directly represent an increase in the state's population by providing additional permanent residences, or represent an expansion of the state's economy by providing a substantial amount of commercial activity or a considerable number of new jobs (i.e., only one additional park ~~ranger-staff~~ position would be created if funding is made available). In addition, the measures required by Mitigation Measure 4.6-b to reduce or offset regional criteria air pollutant emissions would also act to reduce project-related GHG emissions. Therefore, any potential contribution by the project to a net increase in GHG emissions would be less than considerable. This cumulative impact would be *less than significant*.

4.6.5 MITIGATION MEASURES

Mitigation Measure 4.6-a: Implement Measures to Reduce Short-Term Restoration- and Construction Emissions of ROG, NO_x, and PM₁₀

In accordance with BCAQMD recommendations, State Parks shall require restoration and construction contractors to implement the following measures to reduce emissions generated by restoration and construction activities:

- ▶ No open burning shall be performed on the project site. Use alternatives to open burning of vegetative material such as reuse of biomass material for habitat restoration; chipping; or mulching. Alternatively, vegetative material could be hauled/provided to a biomass power facility. The closest biomass power facility is operated jointly by Pacific Oroville Power, Inc. in conjunction with NorCal Waste Systems.
- ▶ On-site vehicles shall be limited to a speed of 15 mph on unpaved roads and surfaces.
- ▶ A publicly visible sign shall be posted at the site with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours. BCAQMD's telephone number shall also be visible to ensure compliance with BCAQMD Rule 200 & 205 (Nuisance and Fugitive Dust Emissions).
- ▶ Vehicles entering or exiting the project site shall travel at a speed which minimizes dust emissions and trackout.
- ▶ Restoration and construction workers shall park in designated parking areas(s) to help reduce dust emissions. Soil pile surfaces shall be moistened if dust is being emitted from the pile(s). Adequately secured tarps, plastic or other material may be required to further reduce dust emissions.

- ▶ Dust suppression measures shall be applied to disturbed areas that are unused for at least four consecutive days. Measures may include the following: frequent watering (a minimum of 2 times per day); covering with weed-free straw mulch; or application of chemical stabilizers.
- ▶ Vegetative ground cover shall be planted in disturbed areas as soon as possible.
- ▶ Land clearing, grading, earth moving, or excavation activities shall be suspended when winds exceed 20 miles per hour.
- ▶ Paved streets adjacent to the restoration and construction sites shall be swept or washed at the end of each day as necessary to remove excessive accumulations of silt and/or mud which may have accumulated as a result of activities on the project sites.
- ▶ When not in use, idling of on-site equipment shall be minimized. Under no conditions shall on-site equipment shall be left idling for more than 5 minutes.

Implementation of Mitigation Measure 4.6-a would incorporate all applicable BCAQMD-recommended measures to reduce emissions generated by restoration and construction activities. For this reason, short-term construction emissions would be reduced to a *less-than-significant* level.

Mitigation Measure 4.6-b: Prohibit campfires during burn bans established by ~~Cal-Fire~~CAL FIRE and/or BCAQMD's "Don't Light Tonight" Advisory Program.

Pursuant to Park Plan Guideline AO-3.3-2, which states that State Parks shall establish appropriate campfire restrictions, through coordination with the local air district in conjunction with the development of an overnight campground at the Park, State Parks shall notify park users of all burn-ban periods determined by the California Department of Forestry and Fire Protection. Burn-ban periods established by the California Department of Forestry and Fire Protection apply to all vegetative and wood burning, including campfires and other burning activities on state land inside Butte County, with no exceptions made by BCAQMD Rule 300, part 2.10 (Williams, pers. comm., 2007). BCAQMD Rule 300, part 2.10 exempts campfires and some other types of burning from burn prohibitions established by other BCAQMD rules. Typically, the California Department of Forestry and Fire Protection begins the burn ban season around July 1 and it extends through October. In addition, the campgrounds at BSRSP shall also participate in BCAQMD's "Don't Light Tonight" program, in which BCAQMD requests that County residents not use woodstoves and fireplaces when air pollution approaches unhealthy levels (BCAQMD 2007c). These advisories are typically in effect for 24-hour periods. State Parks shall keep campground users informed of burn bans by posting notices on kiosks at the park headquarters, self-pay kiosks, and campground restroom and shower facilities. State Parks shall also inform campground users of burn bans upon check-in to the campground.

Implementation of Mitigation Measure 4.6-b would eliminate all campfire emissions during times of the year when the NSVAB experiences minimal atmospheric dispersion. Because campfire burning would be limited to times of the year when wood smoke would be adequately dispersed and therefore not expose sensitive receptors to substantial pollutant concentrations or cause or contribute to the County's nonattainment status with respect to ozone or PM₁₀, this measure would reduce long-term operation-related emissions to a *less-than-significant* level.

5 CUMULATIVE IMPACTS

Section 15130 of the State CEQA Guidelines requires that an EIR discuss cumulative impacts of a project when the project’s incremental effect is *cumulatively considerable*. According to State CEQA Guidelines Section 15065, “Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects as defined in Section 15130.” Sections 15130 and 15355 of the State CEQA Guidelines both stress cumulative impacts in the context of *closely related* projects and from projects *causing related impacts*.

The term *considerable* is subject to interpretation. The standards used herein to determine whether an effect is considerable are that either the impact of the proposed project would contribute in any manner to the existing significant cumulative impact, or the cumulative impact would exceed an established threshold of significance when the proposed project’s incremental effects are combined with similar effects from other projects.

This EIR uses the list method for its cumulative impact analysis. As directed in Section 15130(b)(1)(a) of the State CEQA Guidelines, the EIR must consider “past, present, and probable future projects producing related or cumulative impacts.” The environmental influences of past projects and present projects that have been implemented already exist as a part of current conditions in the project area. Therefore, the contributions of past and present projects to environmental conditions are adequately captured in the description of the existing setting and need not be specifically listed here. This cumulative impact analysis focuses on the potential cumulative physical changes to the existing setting that could occur as a result of a combination of this proposed habitat restoration and outdoor recreation facilities development project and probable future projects. Probable future projects considered in this analysis are included below in Table 5-1.

5.1 CUMULATIVE EFFECTS OF PROPOSED AND SIMILAR PROJECTS PLANNED WITHIN THE STUDY AREA

This cumulative impact analysis examines the combined effects of comparable restoration and/or recreation projects; urban development projects are not included because they are not part of the management strategy for lands within the Inner River Zone and the Sacramento River Conservation Area (SRCA) planning area. (Refer to Chapter 3, “Description of the Proposed Project,” for an overview of management of lands along the middle reaches of the Sacramento River.) Three projects with goals that match or are similar to those of the proposed project are planned to occur in the study area in the reasonably foreseeable future; these projects are listed in Table 5-1.

Table 5-1 Similar Planned Projects in the Study Area				
Project Planned for Restoration or Recreation Facility Development	Owner	River Mile	Approximate Acres Planned for Restoration	Planned Date of Completion
Hamilton City Flood Damage Reduction and Ecosystem Restoration	USACE	Generally between RM 194 and RM 201	1,500	2012
Sacramento River – Chico Landing Subreach Habitat Restoration (Pine Creek, Capay, and Dead Man’s Reach Units)	USFWS	RM 199, 194, and 186	836	2009
Brayton Orchard – Habitat Restoration and Recreation Facilities Development	State Parks	RM 196 (west side of River Road, north of West Sacramento Ave.)	41	2011
Total Restoration Acreage			2,377	
Source: TNC and State Parks 2007				

The USACE and the Reclamation Board are completing the project engineering and design phases required to implement the Hamilton City project, which will involve replacing an existing flood control levee with a setback levee and restoring approximately 1,500 acres of native riparian habitat.

The Sacramento River-Chico Landing Subreach Habitat Restoration Project is currently being implemented as part of USFWS management of lands within the Sacramento River National Wildlife Refuge (SRNWR), a portion of which is located in proximity to the project site, between the Irvine Finch and Pine Creek Landing subunits of BSRSP. A Comprehensive Conservation Plan (CCP) for the SRNWR guides management of the SRNWR for the next 15 years. The SRNWR's mission is to preserve, restore, and enhance riparian habitat for threatened and endangered species, and other wildlife and vegetation.

The third project is very similar to the proposed project. State Parks has proposed habitat restoration and recreation facilities development on the 41-acre Brayton Orchard property within BSRSP.

5.1.1 CUMULATIVE EFFECTS TO AGRICULTURAL RESOURCES

As categorized by the California Department of Conservation (DOC), the proposed project would change existing agricultural land uses in the project area from agriculture to *other land uses*, a category that includes land use changes for environmental purposes, land left idle for extended periods and lands that are taken out of production for any number of reasons. Farmland that is sold into public ownership and habitat restoration projects are included in this category. However, DOC does not track the reasons for a particular parcel's change in land uses.

The proposed project in combination with the other projects listed in Table 5-1 would restore approximately 2,527 acres to primarily native riparian habitat. Approximately 2,200 acres of this acreage was, or still is, in agricultural production. Restoration of riparian habitat and development of outdoor recreation facilities in the study area would be neither irreversible nor cause serious degradation or elimination of the physical or natural conditions that have provided the land's value for farming. The proposed project in combination with the other projects listed in Table 5-1 would not stop or hinder the agricultural practices that occur on neighboring properties. Implementation of the proposed project together with other planned similar projects would be consistent with current public policy directives for management of lands within the Inner River Zone. For all these reasons, implementation of the proposed project together with other planned projects would result in *no cumulatively significant impacts* to the agricultural resources present on the land in the study area.

5.1.2 CUMULATIVE EFFECTS TO HYDROLOGY, WATER QUALITY, AND RIVER GEOMORPHOLOGY

USACE and the Reclamation Board have proposed to increase flood protection and restore the Sacramento River floodplain along the west bank of the river near Hamilton City. This project would involve constructing a setback levee, removing most of the existing "J" levee that currently protects Hamilton City from river flooding, and restoring about 1,500 acres of native riparian vegetation in the levee setback area. The proposed setback levee north of the project area would be gradually reduced in height and would become a training dike where it crosses a narrow section of the west side of Capay Unit of the SRNWR. The 3-foot-high training dike would be designed to reduce high water velocities during flood events and allow flood waters to flow over the top of the levee and gently spread over the adjacent lands. The Capay Unit is located on the west side of the Sacramento River immediately west of the proposed project area.

The hydraulic modeling used in the analysis associated with the Hamilton City proposed project included several SRNWR units (i.e., Pine Creek, Capay, and Dead Man's Reach Units) proposed for native riparian habitat restoration (i.e., Sacramento River-Chico Landing Subreach Habitat Restoration Project). The modeling demonstrated that there is some potential for cumulative hydraulic effects to result from the restoration of SRNWR units that are near each other. While each unit's effects are localized, vegetation changes at individual units can combine to alter flow patterns and speeds (Ayres 2001 and 2002). However, the modeling conducted for

the Hamilton City project study indicated that the combined effects of planned changes in vegetation at the SRNWR units that are in near each other would not create substantial adverse effects (Ayres 2001 and 2002) and that downstream, levee freeboard would be maintained at the Reclamation Board–mandated minimum of 3 feet (Ayres 2003).

Modeling conducted for the proposed project predicted localized changes in flood stage elevations up to 0.10 foot. This small change does not represent an increase that would pose a significant risk to people, structures, or the operation of flood control infrastructure and does not violate existing regulations for risk to flood control infrastructure (Appendix B). Additionally, long term project-related changes in water quality would be expected to improve in areas restored from agricultural cultivation to native riparian habitat. Because modeling for the proposed project and other projects in the area indicated that the effects of individual restoration sites are localized and do not extend for long distances upstream or downstream, the proposed project and related projects would *not result in significant cumulative* hydraulic, geomorphic, or water quality effects on the Sacramento River flood hydrology.

5.1.3 CUMULATIVE EFFECTS TO CULTURAL RESOURCES

Mitigation Measures 4.5-a and 4.5-b from Section 4.5, “Cultural Resources,” would ensure the protection in place, or recovery and subsequent protection, of any significant cultural resources determined to be present in the project area that could be damaged by project-related activities. These management actions would ensure that the value of any historical resource in the project area would be preserved and that project activities would not contribute to any significant impact on cultural resources that may have accrued from disturbance or destruction of prehistoric or historic sites that is likely to have taken place before the enforcement of protections afforded by current laws such as CEQA. In addition, if any previously undiscovered cultural resources are found in the project area during proposed project implementation phases, mitigation described in Section 4.5 would be initiated that would prevent any significant cumulative impacts on cultural resources from occurring. Other habitat restoration and recreation facilities development projects listed in Table 5-1 would be required to protect undiscovered archaeological/cultural resources pursuant to CEQA; therefore, *no cumulatively considerable impact* to cultural resources would occur as a result of implementation of the proposed project together with other similar projects.

5.1.4 CUMULATIVE BENEFICIAL EFFECTS OF THE PROPOSED PROJECT TOGETHER WITH OTHER PROJECTS IN THE STUDY AREA

The proposed project together with other planned projects in the study area would reestablish long-term processes and functions present in riparian habitat 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 (Brown and Wood 2002). Restoration of native riparian habitat in the study area could benefit adjacent and downstream agricultural lands by diminishing the loss of soil from these lands onto adjacent or downstream locations and by increasing groundwater levels. Because the agricultural value of the soil is tied directly to the natural conditions and processes that existed before commercial agricultural development of the land, habitat restoration efforts would in effect be preserving (and possibly improving over time) the agricultural value of the soils (Cannon 2004, Tilman et al. 1996 and 2002).

Sensitive habitats, including Great Valley willow scrub, Great Valley cottonwood riparian forest, and freshwater marsh, are present adjacent to the project area. In addition, six special-status plant species have potential to occur in riparian and freshwater marsh habitats adjacent to the project area. The proposed project together with other planned projects in the area would result in a long-term increase in the overall amount of sensitive habitat within the area. Therefore, *cumulative effects would be beneficial* to vegetation, including sensitive habitats and special-status plants and wildlife. Restoration of cultivated orchard to native riparian habitat, which supports a greater diversity and abundance of wildlife, including many special-status species, would result in long-term beneficial effects to wildlife. Additionally, the proposed project, together with other planned projects in the area, would enhance wildlife

movement along the Sacramento River. Restoration of agricultural lands to natural riparian areas would result in long-term cumulative beneficial effects to fish in the Sacramento River by increasing structural complexity in the aquatic environment, improving water quality, and providing cover, food, and other habitat components. Therefore, cumulative impacts are also considered beneficial to fish habitat and special-status fish species.

5.2 COORDINATED MANAGEMENT EFFORTS FOR THE MIDDLE REACHES OF THE SACRAMENTO RIVER

5.2.1 CONSISTENCY OF THE PROPOSED PROJECT WITH THE CALFED PROGRAM RECORD OF DECISION

As described in the introductory chapters of this ~~Draft~~-EIR, the proposed project would be funded by a CALFED Program ERP grant (ERP-02-P16D¹). The ERP is among the set of linked programmatic actions comprising the Preferred Program Alternative to be implemented over a 30-year period (2000–2030) across two-thirds of the State of California. The ROD for the approval of the CALFED Program documents the final selection of the Preferred Program Alternative from the CALFED Final PEIS/EIR. The ROD includes a summary list of programmatic actions designed to achieve the objectives of the ERP. The most applicable of these actions to the proposed project specifies protection and restoration of the Sacramento River meander corridor consistent with SRCA river corridor management plans and processes (CALFED 2000a). The proposed project is a CALFED Program ERP project that is consistent with the CALFED Program ROD. As described in Chapter 3, “Description of the Proposed Project,” this proposed project has goals and objectives that overlap with those of other related and coordinated programs—including the CALFED Program—that incorporate management of resources along the middle Sacramento River.

¹ The CALFED Program ERP has provided a funding source for projects that include those involving acquisition of lands within the SRCA, initial baseline monitoring and preliminary restoration planning, and preparation of long-term habitat restoration management and monitoring plans.

6 OTHER CEQA-REQUIRED SECTIONS

6.1 GROWTH-INDUCING EFFECTS

CEQA Section 21100(b)(5) specifies that the growth-inducing impacts of a project must be addressed in an EIR. State CEQA Guidelines Section 15126.2(d) states that a proposed project is growth-inducing if it could “foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” Direct growth inducement would result if a project, for example, involved the construction of new housing. Indirect growth inducement would result if a project established substantial new permanent employment opportunities (e.g., new commercial, industrial, or governmental enterprises), involved a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services, or removed an obstacle to housing development. Examples of growth-inducing actions include developing water, wastewater, fire, or other types of service in areas not previously served by those services, extending transportation routes into previously undeveloped areas, and establishing major new employment opportunities.

Implementation of the proposed project would include construction, operation, and maintenance that would be accomplished by contractors whose work would be overseen by State Parks and TNC. These activities would generate short-term employment opportunities; however, the work would be temporary and would occur over a 3-year period with certain activities starting and stopping for shorter durations within this time period. Because of the limited number and type of new jobs that would be generated and the temporary nature of those jobs, it is anticipated that the new jobs would be filled using the existing local employment pool. Existing available housing in the region would easily accommodate any workers who relocate from outside the area, if needed. No new permanent jobs would be created by the project. Therefore, indirect growth-inducing impacts resulting from implementation of the proposed project would be less than significant.

The proposed project would occur on property owned by State Parks (the Nicolaus property is currently owned by TNC, but would be transferred to State Parks as part of the proposed project, prior to implementation of the project). These properties would be managed by State Parks to facilitate creation of a linked network of lands between the project site and the other BSRSP subunits. The proposed project represents a type of project that is consistent with the purposes and existing use of BSRSP. Implementation of the proposed project would not involve construction of housing nor would it involve extension of public services facilities or development of a service area. BSRSP is not nor would be served by public sewer or water connections; rather, the Park uses and would continue use onsite septic systems and groundwater wells. Therefore, the proposed project would not result in direct growth-inducing effects, and no impact would occur.

6.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

CEQA Section 21100(b)(2)(B) provides that an EIR shall include a detailed statement setting forth “[i]n a separate section... [a]ny significant effect on the environment that would be irreversible if the project is implemented.” State CEQA Guidelines Section 15126.2(c) provides the following guidance for an analysis of significant irreversible changes of a project:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Activities related to implementation of the proposed project would include orchard removal, discing, seeding, and planting, which represent standard agricultural practices already in use throughout the study area. Irrigation system modification and expansion would include standard trench and backfill techniques. These activities are reflective of existing conditions in the study area and would not involve new or expanded uses of nonrenewable resources.

In addition to the habitat restoration of the Singh and Nicolaus properties, the proposed project would include the development of public access and outdoor recreation facilities including trails, day-use areas, overnight camping facilities, parking lots, and restrooms. Construction of these facilities would require use of construction equipment that use petroleum fuels, such as gasoline and diesel. The use of such fuels would be a short-term temporary expenditure and would not substantially increase the overall demand for these products.

The proposed project would restore agricultural land to native riparian habitat, removing it from agricultural production. As discussed in Section 4.2, "Agricultural Resources," the project would re-establish natural processes and functions that support native riparian habitat, including the formation of the types of soils that gave these sites their original agricultural value. Because the agricultural value of the soil is tied directly to the natural conditions and processes that existed before commercial agricultural development of the land, habitat restoration efforts would in effect preserve (and possibly improve over time) the agricultural value of the soil (Tilman et al. 1996 and 2002). Furthermore, the proposed recreational facilities would be sufficiently limited in nature such that it would be feasible to return the lands to another resource-based use, such as agricultural production, at some future time. Therefore, the project would not constitute an irreversible conversion of agricultural land.

Implementation of the proposed project would result in an irreversible use of some nonrenewable resources (e.g., petroleum fuels); however, the use of nonrenewable resources would be minor and this impact is considered less than significant.

6.3 SIGNIFICANT UNAVOIDABLE EFFECTS ON THE ENVIRONMENT

CEQA Section 21100(b)(2)(A) provides that an EIR shall include a detailed statement setting forth "[i]n a separate section... [a]ny significant effect on the environment that cannot be avoided if the project is implemented." Chapter 4 of this DEIR provides descriptions of the potential environmental effects of the proposed project for all applicable environmental topic areas, as well as mitigation measures to mitigate project effects. Cumulative effects are discussed in Chapter 5 of this DEIR. Implementation of the proposed mitigation measures would reduce all of the identified significant impacts to less-than-significant levels. Therefore, implementation of this project would result in no significant unavoidable environmental impacts.

7 ALTERNATIVES

7.1 CEQA REQUIREMENTS

Guiding principles for the alternatives analysis are provided by the State CEQA Guidelines Section 15126.6. These principles indicate that the alternatives analysis must: (1) describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project; (2) consider alternatives that could reduce or eliminate any significant environmental impacts of the proposed project, including alternatives that may be more costly or could otherwise impede the project’s objectives; and (3) evaluate the comparative merits of the alternatives. The range of reasonable alternatives must be selected and discussed in a manner that fosters meaningful public participation and informed decision making (State CEQA Guidelines Section 15126.6[f]).

The alternatives analysis in this DEIR is governed by the “rule of reason” in accordance with Section 15126.6(f) of the State CEQA Guidelines. That is, the range of alternatives presented in this document is limited to those that permit for a reasoned choice by State Parks. In addition to the guiding principles for the selection of alternatives as set forth above, Section 15126.6 of the State CEQA Guidelines requires that an EIR: (1) evaluate a no project alternative, (2) identify alternatives that were originally considered but then rejected from further evaluation, and (3) identify the environmentally superior alternative.

Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects (State CEQA Guidelines Section 15126.6[c]). Lead agencies are guided by the general definition of feasibility found in CEQA: “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (State CEQA Guidelines Section 15364).”

A description of the project alternatives, including the no project alternative, is provided in this DEIR to allow for a meaningful evaluation, analysis, and comparison of these alternatives with the proposed project alternative, which is the habitat restoration and outdoor recreation facility development project on two parcels known as the Singh Unit and Nicolaus property, as described in Chapter 3, “Description of the Proposed Project.”

7.2 PROJECT GOALS AND OBJECTIVES

As described above, one of the key factors in considering alternatives is whether they can feasibly attain most of the basic objectives of the project. Section 3.1.2 of this DEIR describes the project objectives for the proposed project. These objectives are listed again below:

HABITAT RESTORATION

The first project objective is to restore natural topography and native vegetation on the Singh Unit and Nicolaus property. This includes the removal of two human made berms on the Singh Unit; the removal of nonnative invasive vegetation, including eucalyptus on the Singh Unit adjacent to River Road; and, restoration of the following natural communities on both parcels: cottonwood riparian forest, valley oak savannah, valley oak forest, mixed riparian forest, native grassland, and valley oak riparian forest. The restoration activities proposed for this project have four central objectives, which are aligned with the California Bay-Delta Authority’s Ecosystem Restoration Program (ERP) Goals:

1. Improve the ecological health and long-term viability of at-risk species and communities at a critical confluence area by protecting and restoring riparian habitat and rehabilitating floodplain processes through horticultural and process-based restoration (ERP Goal 1).

2. Increase knowledge of ecosystem function and employ adaptive management to improve the ability to engineer “desired future conditions” for riparian restoration projects that focus on lowland tributary confluence areas (ERP Goal 2).
3. Reduce flood damage to important human infrastructure by increasing the storage of floodwaters in the project area (ERP Goal 4).
4. Improve water quality to benefit humans and wildlife through the restoration of riparian vegetation communities, and geomorphic and hydrologic processes (ERP Goal 6).

OUTDOOR RECREATION FACILITIES DEVELOPMENT

The second project objective is to increase public access and outdoor recreation opportunities at BSRSP. The outdoor recreation facilities development component of this project has ~~four~~ three key objectives:

- ▶ Develop potential new outdoor recreational use opportunities (day-use and overnight camping).
- ▶ ~~Relocate the BSRSP headquarters and maintenance area to the existing Nicolaus property farm buildings and surrounding site where frequency of flooding is decreased.~~
- ▶ Convert the abandoned BSRSP headquarters and maintenance area to a trailhead with parking, picnic facilities, restrooms and interpretive signs.
- ▶ Install trails that connect to existing and proposed trails in the BSRSP’s Chico Landing Subunit, Indian Fisheries Subunit, and Big Chico Creek Riparian Area Subunit; and the Department of Fish and Game’s (DFG) Pine Creek Unit at Allinger Ranch.

7.3 ALTERNATIVES EVALUATED

7.3.1 ALTERNATIVE 1—NO PROJECT

DESCRIPTION

The no project alternative represents perpetuation of existing agricultural land uses on the Singh Unit and the Nicolaus property. The analysis of this alternative is based on the physical conditions that are likely to occur in the future if the proposed project (the active habitat restoration and development of recreation facilities) is not approved and implemented. Under this alternative the Nicolaus property would not be transferred from TNC to State Parks, the Williamson Act contract would remain in place, riparian habitat would not be restored and no recreation facilities would be constructed on the Singh Unit or the Nicolaus property, and the existing walnut and almond orchards would remain in active production.

EVALUATION

No direct effects would occur, either positive or negative, under the no project alternative. Because there would be no effort to restore riparian habitat, there would be no benefits to sensitive and common native wildlife populations and no increase in habitat values. It is expected that the project site would remain in orchards and would continue to flood periodically. Under this alternative, there would be no air quality, noise, or traffic impacts associated with construction of the proposed project. However, continued operation of the orchards would result in continued environmental effects related to agricultural activities (air emissions, hazardous materials, noise, traffic, water quality, etc.). In addition, the no project alternative would not meet the project objective to restore natural topography and native communities nor the project objective to increase public access and outdoor recreation opportunities at BSRSP.

7.3.2 ALTERNATIVE 2—PASSIVE RESTORATION

DESCRIPTION

Under the passive restoration alternative, the project site would not be actively restored and enhanced, but agricultural activities would cease. The orchards on the Singh Unit and the Nicolaus property would be removed, but the lands would not be actively planted with native riparian vegetation. This alternative would rely on natural recruitment from adjacent riparian communities to recolonize the project site, and on current hydrological conditions to sustain establishing seedlings. A weed control program could be implemented as part of the passive restoration alternative.

No public access or recreational facilities would be constructed under this alternative. The Nicolaus property would still be transferred to State Parks and would become part of BSRSP. However, there would be no developed public access or recreational facilities such as trails, parking areas, campgrounds, or restrooms provided on the Singh Unit or Nicolaus property. Any public use of these areas would be day-use only because no camp sites would be developed. The existing Park headquarters would not be relocated and would continue to be operated at its current location in the Indian Fishery subunit. The existing farm buildings on the Nicolaus property would remain and would likely be used by State Parks for storage and maintenance.

Analysis of this alternative is based on the physical conditions that are likely to occur in the future if active habitat restoration practices and recreational facilities development are not implemented but current land use practices are abandoned to allow natural processes to reclaim the land at the project site.

EVALUATION

The passive restoration alternative would result in the same change in land use from agricultural to riparian habitat that would occur under the proposed project. Like the proposed project, this alternative would involve nonrenewal of the Williamson Act contract on the Nicolaus property, but would not result in conversion of agricultural land to urban uses and would therefore not result in a loss of farmland as a resource, significant damage to soil values of the resource, or detraction from the agricultural land values. However, because the project site would revegetate by natural recruitment, this alternative would not provide the grassland buffers and maintenance of the restored habitat that would help minimize indirect effects and land use conflicts with adjacent private agricultural lands (e.g., pests).

Aesthetically, this alternative would have a detrimental impact due to the removal of the orchards without the active planting of new riparian vegetation. The project site would remain unvegetated for a longer period of time than the proposed project due to reliance on natural recruitment and the lack of active irrigation and maintenance to establish new vegetation.

It is unlikely that the passive restoration alternative would meet the habitat restoration goals of the project (Peterson 2002). This alternative would require a much longer timeframe for the establishment of riparian habitat that would have real value to wildlife. In addition, wildlife habitat value is likely to be lower than is expected with the proposed project because it would likely include a significant amount of nonnative invasive species, and natural recruitment of native species would be lower than with active planting. As such, this alternative would not provide a short-term increase in wildlife habitat value and the long-term habitat values would be diminished in comparison with the proposed project. The flood storage and water quality benefits of this alternative would be similar to the proposed project.

Because this alternative would not involve earth-moving activities for restoration and recreation facilities development, it would avoid any potential construction-related air quality, noise, traffic, and water quality impacts. The lack of recreational facilities would also result in the avoidance of any operational air quality, noise, traffic, and water quality impacts. However, this alternative would not meet the outdoor recreation facilities

development objectives of the project because, although the project site would become part of BSRSP, no day-use or overnight camping facilities would be developed and the Park headquarters would not be relocated.

7.2.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. State CEQA Guidelines Section 15126.6(d)(2) state that if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. Alternatives considered in this DEIR include the proposed project, the no project alternative, and the passive restoration alternative.

The no project alternative would not meet the project objectives to restore natural topography and native vegetation or increase public access and outdoor recreation opportunities at BSRSP and would not provide the biological benefits that would be provided by the other two alternatives.

The proposed project is the environmentally superior alternative of the alternatives considered. Under the proposed project, native species would be planted and actively maintained for 3 years to allow the planted vegetation to become established. The planned maintenance program includes irrigation and weed control to allow root systems to mature to the depth of the water table and to eliminate or control weeds that could interfere with the establishment of native plants. The proposed project would provide the best balance between avoiding environmental impacts and obtaining the project objectives. No significant increases in flood risks would result from any of the alternatives considered. Although some impacts associated with the proposed project would be avoided by the passive restoration alternative, those impacts would be reduced to a less-than-significant level under the proposed project with the incorporation of mitigation. In addition, the proposed project would provide greater benefits to biological and recreational resources than the no project or passive relocation alternatives.

7.2.4 ALTERNATIVES CONSIDERED AND ELIMINATED FROM DETAILED EVALUATION

During the planning stages of the proposed project, an alternative was considered that was identical to the proposed project, except that the habitat restoration plan for the Singh Unit included mixed riparian forest in the area of the existing/historic swale. The swale runs north-south along the western portion of the Singh property, and historically transferred water from the lands to the north to the south to Big Chico Creek near its confluence with Mud Creek. This alternative of mixed riparian forest in the area of the swale was considered to reduce water velocities and erosion through the private property to the north and through the project site. However, the landowners of the private property to the north of the Singh Unit expressed concerns during the scoping period regarding the forested vegetation and the potential to back-up water and sediment onto their property. In response to these concerns, TNC re-designed the Singh Unit restoration plans to provide a flowthrough meadow along the swale and re-modeled the restoration plans. The modeling determined that there would be flow velocity increases of up to 4.752.0 feet per second within the swale, but that the proposed changes would not be expected to substantially alter sediment transport and deposition within the project area. Therefore, the meadow flowthrough area was maintained in the proposed project (see Chapter 3 and Appendix C) and the restoration plan with mixed riparian forest habitat in the swale was eliminated from further consideration.

8 COMMENTS AND RESPONSES TO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT

8.1 LIST OF COMMENTERS

Thirteen letters were received on the draft environmental impact report (Draft EIR) during the public comment period, and members of the public provided oral comments on the Draft EIR during the public hearing held February 19, 2008. The list of commenters on the Draft EIR, along with the topic of each comment, is presented in Table 8-1. Each letter and comment has been assigned a letter/number designation for cross-referencing purposes (for example, the first State agency letter is Letter S1, and the first comment in the letter is S1-1). The comment letters and public-hearing comments and the responses to the substantive environmental issues raised in those comments are presented in Section 8.2.

Table 8-1 Comments Received on the Draft Environmental Impact Report				
Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
LETTER COMMENTS				
State Agencies				
S1	State of California Department of Transportation District 3 Matt Friedman, Transportation Planner	February 7, 2008	S1-1	Based on minimal impacts to the State Highway System, Caltrans District 3 has no comments
S2	State of California Department of Water Resources Christopher Huitt Staff Environmental Scientist Floodway Protection Section	March 7, 2008	S2-1	Potential for the project to encroach on an adopted flood control plan, which would require an encroachment permit from the Central Valley Flood Protection Board prior to initiating any activities
S3	State of California Governor's Office of Planning and Research State Clearinghouse and Planning Unit Terry Roberts, Director	March 18, 2008	S3-1	State Clearinghouse submitted the Draft EIR to State agencies for review and is forwarding State agency comments for use in preparing the Final EIR
			S3-2	Acknowledgement of compliance with the State Clearinghouse review requirements for draft environmental documents pursuant to CEQA
			S3-3	Comment from the Department of Water Resources regarding the potential for the project to encroach on an adopted flood control plan, which would require an encroachment permit from the Central Valley Flood Protection Board prior to initiating any activities

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
Local Agencies				
L1	Butte County Board of Supervisors Curt Josiassen, Chair Fourth District	March 11, 2008	L1-1	Opposition to the proposed project
			L1-2	Insufficient noticing to Butte County Board of Supervisors
			L1-3	Proposed project is inappropriate for the proposed location; incompatible with surrounding agricultural land
			L1-4	Concern that the Draft EIR does not meet CEQA requirements
			L1-5	Disregard for local land use policies
			L1-6	Concern regarding development in a flood plain
			L1-7	Concern regarding the inundation of sewage disposal systems during flood events
			L1-8	Land use compatibility with local agricultural operations
			L1-9	Concern regarding additional requests for assistance from Sheriff and Fire personnel
			L1-10	Concern regarding management of long-term camping
			L1-11	Insufficient noticing to Butte County Board of Supervisors
			L1-12	Analysis of noise per Butte County Noise Element Policy
			L1-13	Consideration of Butte County General Plan policies regarding fire protection
			L1-14	Inclusion of Butte County General Plan agricultural goals, policies, and programs
			L1-15	Comments from Butte County Agricultural Commissioner
			L1-16	Level of significance of impact to prime farmland
			L1-17	Butte County General Plan Agricultural Element - requirements for agricultural buffer setbacks

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			L1-18	Butte County General Plan Agricultural Element – requirement to mitigate impacts to public services when agricultural land is converted to non-agricultural land
			L1-19	Butte County General Plan Agricultural Element – support Chico Greenline policies
			L1-20	Butte County General Plan Agricultural Element – application of the County’s Right to Farm ordinance
			L1-21	Direct change of land use from agricultural land to riparian habitat and recreational facilities
			L1-22	Definition of urban and built-up land and analysis of changing agricultural land to riparian habitat and recreational facilities
			L1-23	Butte County Agricultural zoning designation
			L1-24	Land use conflicts between proposed recreational facilities and adjacent agricultural land
			L1-25	Definition of urban and built-up land and analysis of changing agricultural land to riparian habitat and recreational facilities
			L1-26	Land use conflicts between proposed recreational facilities and adjacent agricultural land
			L1-27	Lack of mitigation measures for agricultural resource impacts
			L1-28	Definition of urban and built-up land and analysis of changing agricultural land to riparian habitat and recreational facilities
			L1-29	Williamson Act Contract cancellation
			L1-30	Butte County Code requirements for development within a designated flood plain
			L1-31	Concern regarding the safety of proposed structures during flood events

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			L1-32	Concern regarding the inundation of sewage disposal systems during flood events
			L1-33	Flood Neutral Hydraulic Analysis setting assumptions
			L1-34	Flood Neutral Hydraulic Analysis needs to address flows coming in below the Hamilton City gauge
			L1-35	Flood Neutral Hydraulic Analysis needs to address the backwater effects and address the east side of Mud Creek
			L1-36	Concern regarding how recreational facilities' constructed elevation is accounted for in the Flood Neutral Hydraulic Analysis
			L1-37	Connection for trails between the Singh Unit and the Nicolaus property
			L1-38	Concern regarding large RVs on River Road
			L1-39	Adequacy of analysis of impacts to neighboring agricultural operations
			L1-40	Unclear analysis of agricultural impacts
			L1-41	Direct change of land use from agricultural land to riparian habitat and recreational facilities
			L1-42	Lack of mitigation measures for agricultural resource impacts
			L1-43	Adequacy of analysis of impacts to agricultural resources
			L1-44	Project and analysis need to address Butte County's Right to Farm Ordinance
			L1-45	Concern that the Draft EIR does not meet CEQA requirements
			L1-46	Concern regarding the inundation of sewage disposal systems during flood events
			L1-47	Adequacy of existing groundwater wells for potable water

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			L1-48	Butte County Environmental Health requirements for a Hazardous Materials Release Response Plan
			L1-49	Concern regarding additional requests for assistance from the Sheriff's Department
			L1-50	Land use conflicts between proposed recreational facilities and adjacent agricultural land
			L1-51	Other criminal justice related impacts on Butte County
			L1-52	Concern regarding additional requests for assistance from the Fire Department
			L1-53	Concern regarding vegetation management of the restored riparian habitat and fire protection
			L1-54	Fire Department suggestion for emergency access, suggesting an additional exit road
			L1-55	State Parks employees should be trained on how to use an Automated Electronic Defibrillator and have one on site
			L1-56	Requesting consideration of an emergency access road to the Sacramento River
			L1-57	Concern regarding the scope of the EIR and analysis of impacts to neighboring lands
			L1-58	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis
			L1-59	Concern regarding erosion of River Road due to riparian habitat restoration
			L1-60	Concern regarding increased traffic and pedestrian/ bicycle/ vehicle safety on River Road
			L1-61	Lack of safe river access near the proposed campground
			L1-62	Potential for increased trespass on private agricultural land due to the project

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			L1-63	Concern regarding storm water contamination from the project site and impacts to adjacent land
			L1-64	Concern regarding impacts to agricultural land
			L1-65	Concern that the project conflicts with the Greenline and the Butte County General Plan
			L1-66	Concern regarding conflict with the Butte County Agricultural zoning designation
			L1-67	Concern regarding the investment of resources to fund this project while Woodson Bridge State Park is proposed to be closed
			L1-68	Concern that the Draft EIR does not meet CEQA requirements
			L1-69	Request for response to comments
			L1-70	Insufficient noticing to Butte County Board of Supervisors
			L1-71	Concern regarding the scope of the EIR and analysis of impacts to neighboring lands
			L1-72	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis
			L1-73	Concern regarding erosion of River Road due to riparian habitat restoration
			L1-74	Concern regarding increased traffic and pedestrian/ bicycle/ vehicle safety on River Road
			L1-75	Lack of safe river access near the proposed campground
			L1-76	Concern regarding additional requests for assistance from the Sheriff and Fire Departments
			L1-77	Potential for increased trespass on private agricultural land due to the project
			L1-78	Concern regarding storm water contamination from the project site and impacts to adjacent land

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			L1-79	Land use conflicts between proposed recreational facilities and adjacent agricultural land
			L1-80	Williamson Act Contract cancellation
			L1-81	Revenue and costs related to the recreational facilities
			L1-82	Concern that the project conflicts with the Greenline and the Butte County General Plan
			L1-83	Potential fiscal impacts to Butte County
			L1-84	Opposition to the proposed project
			L1-85	Concern regarding flood levels and velocity due to the riparian restoration
			L1-86	Flood Neutral Hydraulic Analysis needs to address Mud Creek, Rock Creek, Lindo Channel, and Chico Creek
			L1-87	Concern that the proposed grassland buffer is insufficient
			L1-88	Concern regarding noise impacts at the day use area on River Road (at the location of the current BSRSP headquarters)
			L1-89	Concern regarding the investment of resources to fund this project while Woodson Bridge State Park is proposed to be closed
			L1-90	Request to address social consequences of the project
			L1-91	Request responses to Sacramento River Reclamation District comments
			L1-92	Inadequate public noticing and responses to scoping comments
			L1-93	Analyzing impacts to the east of Mud Creek
			L1-94	Insufficient public noticing

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			L1-95	State, local, and federal agencies should not acquire agricultural land for habitat protection or public recreation
			L1-96	Land use conflicts between proposed recreational facilities and adjacent agricultural land
			L1-97	Concern regarding negative impact to the economic viability of surrounding agricultural land
L2	Butte County Farm Bureau Colleen Aguiar, Executive Director	March 17, 2008	L2-1	Comments supplement scoping comments submitted on September 25, 2007
			L2-2	Concern regarding flooding impacts and public safety
			L2-3	Concern regarding additional requests for assistance from the Sheriff and Fire Departments
			L2-4	Level of significance of impact related to direct conversion of prime farmland
			L2-5	Williamson Act Contract cancellation
			L2-6	Level of significance of impact related to direct conversion of prime farmland conversion of agricultural land
			L2-7	Potential for increased trespass on private agricultural land due to the project
			L2-8	Level of significance of impact related to direct and indirect impacts to agricultural resources
			L2-9	Concern regarding indirect economic impact to neighboring agricultural land
			L2-10	Level of significance of impact related to direct conversion of prime farmland conversion of agricultural land
			L2-11	Williamson Act Contract cancellation and the Butte County Right to Farm Ordinance

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
L3	Sacramento River Reclamation District Paul Minasian, Attorney at Law Minasian, Spruance, Meith, Soares & Sexton, LLP	March 17, 2008	L3-1	Acknowledgement of previous comments
			L3-2	Responsible agency consultation
			L3-3	Concern regarding effects on U.S. Army Corps of Engineers flood control project
			L3-4	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis and the exclusion of Mud Creek from the analysis
			L3-5	Concern regarding increased roughness, flood levels, and drainage
			L3-6	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis and the exclusion of Mud Creek from the analysis
			L3-7	Concern regarding increased roughness and flood levels
			L3-8	Concern regarding increased roughness and flood levels
			L3-9	Concern regarding effects on U.S. Army Corps of Engineers flood control project and potential for misdemeanor under Water Code Section 720
			L3-10	Concern regarding increased roughness and flood levels
			L3-11	Williamson Act Contract cancellation
			L3-12	Adequacy of the CEQA document
			L3-13	Level of significance of project impacts to hydrology
			L3-14	Williamson Act Contract cancellation
			L3-15	Williamson Act Contract cancellation and cancellation fees
			L3-16	Concern regarding direct and indirect impacts to agricultural resources
			L3-17	No project alternative
			L3-18	Responsible agency consultation

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			L3-19	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis and the exclusion of Mud Creek from the analysis
			L3-20	Concern regarding effects on U.S. Army Corps of Engineers flood control project
Individual				
I1	Patricia Puterbaugh Germain Boivin Floral Native Nursery	February 4, 2008	I1-1	Support for the project
I2	Clint Maderos Clint Maderos Backhoe Service	February 18, 2008	I2-1	Insufficient public noticing
			I2-2	Concern regarding coordination with local land owners
			I2-3	Coordination in 2006 and scope of the project
			I2-4	Concern that the proposed grassland buffer is insufficient
			I2-5	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis
			I2-6	Concern regarding increased roughness and flood levels
			I2-7	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis and the inclusion of Mud Creek and Rock Creek
			I2-8	Historical flooding in the project area
			I2-9	Potential for new diesel agricultural water pump across River Road from the day use area (current BSRSP headquarters location)
			I2-10	Reasoning behind the project, inclusion of recreational facilities and location of the day use area on River Road at the current BSRSP headquarters location

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
I3	Connie and Don Brennan	March 6, 2008	I3-1	Opposition to the proposed project
			I3-2	Concern regarding the investment of resources to fund this project while Woodson Bridge State Park is proposed to be closed
I4	David Maznar	March 9, 2008	I4-1	Opposition to the proposed project
			I4-2	Support for comments from Clint Maderos and Mr. and Mrs. Brennan
			I4-3	Concern regarding the investment of resources to fund this project while Woodson Bridge State Park is proposed to be closed
I5	Daniel C. Heal	March 14, 2008	I5-1	Support for the project
I6	Clint Maderos Clint Maderos Backhoe Service	March 15, 2008	I6-1	Opposition to the proposed project
			I6-2	Concern regarding location of day use area on River Road (at the location of the current BSRSP headquarters)
			I6-3	Concern that the proposed grassland buffer is insufficient
			I6-4	Concern regarding new lighting near residences
			I6-5	Concern regarding adequacy of the noise analysis
			I6-6	Concern regarding use of generators in the campsites and noise impacts
			I6-7	Concern regarding increased roughness and flood levels as well as clean-up of debris after flood events
			I6-8	Concern regarding increased fire hazard
			I6-9	Concern regarding the inundation of sewage disposal systems during flood events and water quality
			I6-10	Correct speed limit for River Road

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			I6-11	Concern regarding safety of bicycle traffic on River Road
			I6-12	Concern regarding hunting activities on neighboring land
			I6-13	Concern regarding planting poison oak
			I6-14	Concern regarding justification for an RV campground
			I6-15	List of interested agencies
			I6-17	Concern regarding coordination with local land owners
			I6-18	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis and the exclusion of Mud Creek, Rock Creek, Kusal Slough, Lindo Channel, and Chico Creek from the analysis
			I6-19	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis and increased roughness and flood levels
			I6-20	Level of significance of hydrologic impacts
			I6-21	Visual representation of restoration plans
			I6-22	Clarification requested regarding wastewater treatment
			I6-23	Insufficient public noticing
			I6-24	Economic impact of change in land use from agriculture to non-agricultural use
			I6-25	Concern regarding increased roughness and flood levels and Park maintenance
			I6-26	Correction regarding the number of water wells on the Nicolaus property
			I6-27	Concern regarding additional requests for assistance from Sheriff and Fire personnel
			I6-28	Concern that the proposed grassland buffer is insufficient

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			I6-29	Request to install a drainage ditch between Mud Creek and River Road
			I6-30	Concern that the proposed grassland buffer is insufficient and indirect effects to neighboring agricultural land
			I6-31	Request for written promise regarding lack of conflict between agricultural activities and BSRSP
			I6-32	Concern that the proposed grassland buffer is insufficient
			I6-33	Concern regarding coordination with local land owners
			I6-34	Request for copy of Public Hearing comments (on February 19, 2008)
			I6-35	Request notice or receipt of comments and responses
I7	Larry Mendonca	March 17, 2008	I7-1	Request for survey of property boundaries
			I7-2	Concern that the proposed grassland buffer is insufficient
			I7-3	Concern regarding the accuracy of the Flood Neutral Hydraulic Analysis
			I7-4	Request removal of berm on the west side of the Singh Unit
			I7-5	Request removal of berms on Mud Creek
			I7-6	Request clean out of sough draining to Chico Creek
			I7-7	Concern regarding increased roughness and flood levels, request that the Singh Unit be open grassland
			I7-8	Concern regarding the inundation of sewage disposal systems during flood events and water quality
			I7-9	Concern regarding additional requests for assistance from Sheriff and Fire personnel

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			I7-10	Concern regarding increased traffic on River Road, particularly RVs
			I7-11	Request for written promise regarding lack of conflict between agricultural activities and BSRSP
COMMENTS MADE AT FEBRUARY 19, 2008, PUBLIC HEARING				
PH	Transcript of public hearing/workshop on the Draft EIR	February 19, 2008	PH-1	The proposed grassland buffers in the habitat restoration plans, between restored areas and adjacent private agricultural lands, should be greater than 100 feet. The adjacent private land owners feel the buffer should be at least 300–500 feet.
			PH-2	What parameters and data were used in the Hydraulic Model? Neighboring land owners are concerned that the model did not adequately account for flood flows from Mud Creek, Rock Creek, and Big Chico Creek, and that it focused incorrectly on only Sacramento River flood flows.
			PH-3	Why does the Hydraulic Model show changes in flood level and velocity only in certain locations?
			PH-4	What is the rate of drainage of flood waters?
			PH-5	Why is the site on River Road (the current BSRSP headquarters location) going to be used as a day-use area when it is directly across from a private residence?
			PH-6	There is a diesel pump approximately 35 feet from the existing BSRSP headquarters site that is proposed to be used for a day-use area.
			PH-7	Will the day use area be gated and locked nightly?

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			PH-8	The U.S. Army Corps of Engineers has plans for Mud Creek, which calls for overflow onto agricultural land and then let it slowly drain to the Sacramento River. The proposed project would affect this plan.
			PH-9	The topographic maps indicate there was a swale running east-west on the Singh Unit. Will that be restored?
			PH-10	Cancellation of the Williamson Act contract on the Nicolaus property undermines the Williamson Act and is a significant effect related to the loss of agricultural resources.
			PH-11	Neighboring land owner is concerned that the change of vegetation from orchards to riparian habitat will result in denser vegetation and will therefore backup water onto adjacent properties.
			PH-12	How will State Parks handle/maintain flood debris during and after floods?
			PH-13	Neighboring land owners are concerned that noise from agricultural operations will result in disturbances to park visitors, which will then complain. The land owners are concerned that this could result in some detrimental effect on their ability to continue agricultural operations.
			PH-14	Why does the project propose putting campsites on the Nicolaus property at this time?
			PH-15	The EIR needs to address potential effects of the project to land that is east of Mud Creek.
			PH-16	Are the alternatives analyzed in the EIR adequate? Are there alternatives to converting agricultural land to recreational facilities?)

**Table 8-1
Comments Received on the Draft Environmental Impact Report**

Letter/ Meeting	Commenter	Date Received	Comment Number	Comment Topic(s)
			PH-17	Will the project sites be fenced? The adjacent private land owners would like a fence to discourage trespassing and make the park boundary clear, but want to ensure that the fence is designed to not capture or back up debris during flood events.
			PH-18	Neighboring private land owners are concerned about pests and invasive species negatively impacting their agricultural production (such as black walnut volunteers bringing walnut husk fly, squirrels and rodents, deer, mosquitoes, and beaver). Neighbors state that they may need to use additional pesticides due to the proposed project.
			PH-19	Neighboring private land owners are concerned about people trespassing on their properties from the project sites.
			PH-20	How will the restrooms and dump station be designed to avoid leaking and contaminating adjacent properties, especially during flood events?
			PH-21	Who makes the final decision to approve or deny the project?

8.2 WRITTEN AND ORAL COMMENTS AND RESPONSES

The written and oral comments received on the Draft EIR and the responses to those comments are provided in this section. All comment letters are reproduced in their entirety and oral comments provided during the public-hearing are summarized. Each comment is followed by a response to the comment, with the focus of the response being on substantive environmental issues.

In some instances, responses to comments may warrant modification of the text of the Draft EIR. The Draft EIR has been revised and reprinted in its entirety in this Final EIR document. Revisions to the EIR text are shown with strikethrough (~~strikethrough~~) text for deletions and underlined (underlined) text for additions. The text changes involve revisions to the project description (Chapter 3), revisions to technical appendices, and revisions or clarifications to the environmental analysis (Chapter 4). As shown in Chapter 4 of this Final EIR, the revisions/clarifications to the environmental analysis did not change the level of significance of the environmental impacts of the project; do not require new or additional mitigation measures; and therefore, do not warrant recirculation of the Draft EIR.

COMMON COMMENTS AND COMMON RESPONSES

Several comments were raised by multiple parties and are addressed collectively herein.

COMMON RESPONSE 1—OPPOSITION TO THE PROPOSED PROJECT

COMMON COMMENT

Multiple commenters stated that they oppose the project and questioned why this project was being proposed at this location and time. (See comments L1-1, L1-3, L1-6, L1-84, I2-10, I3-1, I4-1, I6-1 and PH-14)

COMMON RESPONSE

Chapter 3, “Description of the Proposed Project,” of the EIR provides information on the project background and purpose; project objectives; consistency of the project with related regional planning and management efforts; and the importance of riparian habitat. The project purpose and objectives have not changed; however, to fully respond to the commenters, much of Draft EIR information is summarized and explained below. In addition, please refer to Chapter 3 of the EIR for the complete text.

Importance of Habitat Restoration

The importance and substantial historic loss of riparian habitat are discussed in Section 3.1.4 of the EIR. The Singh Unit and Nicolaus property present a unique opportunity for riparian habitat restoration because they are located near the confluence of the Sacramento River, Big Chico Creek, and Mud Creek (Exhibit 3-2 of the EIR). The protection and restoration of riparian habitat on these two parcels would aid in the recovery of special-status species, rehabilitate natural river processes, protect and restore riparian habitat, and improve water quality. Over 225 species of birds, mammals, reptiles, and amphibians in California depend on riparian habitats for nesting, foraging, dispersal corridors, and migration stop-over sites. Riparian vegetation supplies instream habitat important for fish, semi-aquatic reptiles and amphibians, and aquatic insects (Riparian Habitat Joint Venture 2004). It is also critical to the quality of instream habitat and aquatic life, providing shade, food, and nutrients that form the basis of the food chain (Jensen et al. 1993, cited in RHJV 2004). Riparian habitats may be the most important habitat for land bird species in California (Manley and Davidson 1993, cited in RHJV 2004).

Demand for Recreation Facilities

Sacramento River Public Recreation Access Study

As explained in Section 3.3.1 of the EIR, The Nature Conservancy (TNC), in conjunction with the USFWS, the California Wildlife Conservation Board and DFG, commissioned a study conducted in 2003 to assess existing and potential public recreation uses, access needs, and opportunities along a 100-mile stretch of the Sacramento River between Red Bluff and Colusa. The goals of the Sacramento River Public Recreation Access Study (EDAW 2003) were: (1) to identify and characterize existing public access opportunities and needs associated with public recreation facilities and infrastructure throughout the study area, and (2) to identify and make recommendations for future public recreation access opportunities and management programs in the study area.

The results of the 2003 study indicated substantial public interest in natural areas. Potentially attractive recreation uses along the Sacramento River include trail hiking, walking, hunting and fishing, camping, wildlife viewing, nature study, picnicking, boating, beach activities, attending outdoor cultural events, and visiting museums and historic sites. Regional trends indicated a continued interest in the traditional outdoor recreation activities of boating, fishing, and hunting. Additionally, other nature observation activities, such as bird watching and wildlife viewing, are expected to increase 65% over the next 40 years. Furthermore, the study found that population

growth in the local four-county area (Butte, Colusa, Glenn, and Tehama Counties) is expected to increase by 55% in the next two decades, with about half of the local area growth expected to occur in Butte County.

State Parks' Central Valley Vision

The proposed project is also consistent with State Parks' Central Valley Vision, which provides recommendations for park acquisition, development, and program activities over a 20-year planning horizon (DPR 2007). During the Central Valley Vision planning process, which began in 2003, State Parks found that there are significant resource protection and recreational opportunities and programs in the Central Valley through which State Parks can better serve the needs of Valley residents and visitors (DPR 2007). Recognizing and responding to the rapid population growth anticipated in the Central Valley over the next 20–30 years, the dearth of State Park facilities in the Central Valley, and the increasing diversity of visitor needs and interests, State Parks is working to expand and improve park facilities and recreation programs at Central Valley State Park System units, including BSRSP. Public input during the Central Valley Vision planning process found a strong interest in river access with adjacent day-use and camping facilities, as well as preservation of riparian habitat (DPR 2007).

BSRSP General Plan

The BSRSP General Plan and EIR (Park Plan) documented the need for trails, day use areas, and campsites in response to demands for such facilities. The Park Plan noted the importance of facilitating efficient circulation within and between Park subunits and that the predominant mode of internal circulation is and will continue to be the Park's trail system because there are no major vehicular roadways that promote internal circulation. The Park Plan states,

“Trails can serve a wide range of non-motorized activities. They provide footpaths to fishing access areas that are located away from major roadways, access to high-quality wildlife observation and sight-seeing opportunities, and can accommodate multiple modes of transportation, including walking/hiking, bicycling, horseback riding, and even water-based transportation such as kayaks and canoes. As development in the region progresses and populations grow, it is anticipated that the Park will experience an increased demand for multi-use trail systems, particularly along the river corridor. Issues that must be considered in the development of a sound internal circulation plan include the types of trail systems proposed, impacts to vegetation and wildlife, and the need for directional signage and maps as appropriate. By informing visitors of their location and adjacent land ownership patterns, directional signage and maps can orient Park visitors and assist them to avoid trespassing on private lands.”

The Park Plan addressed day use areas, explaining that they are used as staging for hiking, birding, and other recreational activities, but are primarily used for picnicking, an activity that may be enjoyed by people of all ages and abilities. Picnicking is one of the most popular recreation activities in the region, with demand increasing as population in the area grows.

The Park Plan also states that overnight camping facilities are in high demand in the region. There are no developed campgrounds from BSRSP south to Colusa, a stretch of approximately 50 river miles. Opportunities for environmental boat-in camping are generally more available, but are limited to gravel bars below the ordinary high-water mark on the river. Both developed and environmental (or primitive) camping opportunities have been identified by Park users as a desired feature of future Park development, with greater emphasis and need for developed campgrounds relative to environmental campsites.

Therefore, the inclusion of the Nicolaus property within BSRSP and restoration of the Nicolaus property and the Singh Unit with riparian habitat would present an opportunity to enhance and expand the Park's recreational and public access opportunities through new and expanded trails, new day and overnight facilities, and visitor-service enhancement, thereby addressing the documented demands for outdoor recreation facilities.

Acquisition of the Nicolaus property, and subsequent habitat restoration and development of outdoor recreation facilities on the Nicolaus property and Singh Unit would address public interests expressed during TNC's Sacramento River Public Recreation Access Study, State Parks' Central Valley Vision planning process, and State Parks' General Planning process for BSRSP.

Consistency with Regional Plans

As described in Section 1.3 of the EIR, the proposed project is consistent with and implements a wide range of BSRSP Park Plan goals. The protection and restoration of natural and cultural resources are key components of the Park Plan. The Park Plan allows for additional biological habitat restoration and water quality protection; preserves scenic and cultural resources; and calls for facility developments and improvements in response to local and regional demand, yet with consideration given to physical and environmental constraints.

As documented in Section 3.1.3 of the EIR, the Singh Unit and Nicolaus property are located within the inner river zone of the Sacramento River Conservation Area (SRCA), on lands identified by the U.S. Fish and Wildlife Service (USFWS) in the *Final Environmental Assessment for Proposed Restoration Activities on the Sacramento River National Wildlife Refuge* (USFWS 2002) as having high potential for restoration of native riparian habitat that would benefit fish, wildlife and plant species dependent on a naturally functioning riverine ecosystem. The inner river zone stretches from Red Bluff to Colusa and is defined as the 150-year meander zone of the Sacramento River, or the location in which the river has meandered within the last 100 years and is predicted to meander over the next 50 years. Most of the properties within this zone also lie within the 2 ½ to 4-year flood recurrence interval zone of the river, which means that they have a 40 to 25 percent chance of flooding each year, generally in winter or spring (based on aerial photograph-interpreted flood recurrence intervals generated by the California Department of Water Resources [DWR]). The inner river zone guideline defines, for the most part, the SRCA planning boundary used by state and federal agencies, and private entities to restore and enhance natural riparian habitats and functions along the Sacramento River (SRCA Forum 2003). The suitable hydrology, soils, and presence of protected native riparian habitat within the inner river zone contribute to the suitability of the proposed project site for restoration of riparian habitat that was historically extensive along the middle Sacramento River.

Furthermore, as documented in Section 3.3 of the EIR, the project site is located within the SRCA stretch of the Sacramento River addressed by the Upper Sacramento River Fisheries and Riparian Habitat Management Plan published by the State of California Resources Agency in 1989. The goal of the SRCA is to "preserve remaining riparian habitat and reestablish a continuous riparian ecosystem along the Sacramento River between Redding and Chico and reestablish riparian vegetation along the river from Chico to Verona." The Sacramento River Conservation Area Forum (SRCAF) is a group of local, state, federal, and private organizations that help implement the actions necessary to achieve the goal of the SRCA. The guiding principals for the SRCA include: ecosystem management, flood management, voluntary participation, local concerns, bank protection, and information and education. Planning for the project has considered the management strategies developed for the SRCA.

Less than Significant Environmental Impacts

The proposed project is consistent with the goal of riparian habitat restoration along this reach of the Sacramento River within the SRCA and addresses the increased local demand for recreation facilities. The EIR analyzes the impacts of the proposed project construction and operation on the environment. The EIR does not identify any significant environmental impacts that cannot be mitigated. Potential environmental impacts associated with this project would be less than significant with the implementation of mitigation measures. As presented in Section 4.1 of the EIR, the project would have less than significant impacts related to the following resources and the Park Plan adequately addressed these topics:

- ▶ aesthetics/visual resources
- ▶ geology and soils
- ▶ hazards and hazardous materials
- ▶ land use and planning
- ▶ mineral resources
- ▶ noise
- ▶ population and housing
- ▶ public services
- ▶ recreation
- ▶ transportation/traffic and circulation
- ▶ utilities and service systems

Additionally, as presented in Sections 4.2 through 4.6 of the EIR, detailed analyses and impact discussions were provided for the following resource areas, and in each case the project was determined to result in less than significant impacts, with mitigation measures incorporated as necessary:

- ▶ agricultural resources
- ▶ hydrology and water quality
- ▶ biological resources
- ▶ cultural resources
- ▶ air quality and climate change

All required mitigation measures would be tracked pursuant to the Mitigation Monitoring and Reporting Program included in Appendix G of this EIR. Therefore, it is reasonable that this project is proposed at its location to meet the need for riparian habitat restoration and the demand for recreation facilities.

State Parks Respects Public and Agency Concerns

State Parks respects the concerns of other agencies and members of the public, takes them seriously, and, where appropriate, has made project changes to resolve them. State Parks is committed to being a good neighbor and has considered all comments that were received in the planning process for the proposed project and, in many cases, has made changes to plans and documents related to the comments. The restoration plans for the Singh Unit were revised prior to publication of the Draft EIR to include a grassy swale in response to neighbors concerns regarding potential restoration-related changes to flood velocities, elevations and sedimentation on the private property north of the Singh Unit. In response to agency and neighbors' comments on the Draft EIR regarding recreational vehicle (RV) campgrounds and related concerns about roadway safety, utilities, noise, and other potential disturbances, the recreation plans have been revised further to remove RV campgrounds. Also in response to neighbor's comments on the Draft EIR regarding the day use area (to remain at the existing BSRSP headquarters site) and potential noise, trespass and other disturbances, the restoration plans have been revised to remove one of the existing entry points at the day-use area and to provide more of a vegetated buffer to the neighbor across River Road. Further, as stated in Chapter 1 of the EIR, the project would be consistent with Goal AO-4 of the Park Plan and State Parks will continue to work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership pattern in the area.

Lead Agency – Project Decision

As explained in Section 1.7 of this EIR, State Parks is the lead agency for the project. State Parks has the principal responsibility for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the EIR public-review process is complete, the Director of State Parks is the party responsible for certifying that the EIR adequately evaluates the impacts of the project. The Director also has the authority to either approve, modify, or reject the project. State Parks will consider the environmental document, including public and agency comments, as well as the complete record for this project in rendering a project decision.

COMMON RESPONSE 2—ADEQUACY OF CEQA PUBLIC NOTICING

COMMON COMMENT

Comments from Butte County and members of the public allege noncompliance with consultation and adequate noticing to agencies and the public regarding the project and the CEQA environmental review process. (See Comments L1-2, L1-11, L1-69, L1-70, L1-92, L1-94, L3-2, I2-1, I2-2, I6-17, I6-23 and I6-33)

COMMON RESPONSE

State Parks, as well as TNC, has engaged in agency and public coordination and outreach from the inception of the proposed project and has provided public noticing and comment periods as required by CEQA (State CEQA Guidelines Sections 15082, 15083, 15085, 15086, 15087, 15088, and 15105). A history of this public outreach is provided below. The level of public notice and outreach meets and, in many cases, substantially exceeds what is required by CEQA.

Coordination Regarding CALFED ERP Grant Agreement

The following coordination occurred between TNC, State Parks, Butte County, the Sacramento River Reclamation District, other interested groups/committees, and the public during the TNC grant submission/agreement for the CALFED Ecosystem Restoration (ERP) grant. The CALFED ERP grant agreement established the funding source for TNC to purchase the Nicolaus property, and other possible properties for inclusion into the Bidwell-Sacramento River State Park, as well as restoration planning and permitting.

- ▶ TNC received a letter from State Parks (Kathryn Foley, District Superintendent) stating State Parks' willingness to take possession of the Singh parcel from TNC after TNC purchases the property. Letter dated July 31, 2001.
- ▶ TNC presented its CALFED ERP grant proposal at the Sacramento River Reclamation District Board of Directors meeting, attended also by Butte County Emergency Services Officer, Michael Madden, on August 10, 2001.
- ▶ TNC presented the grant proposal to the Sacramento River Conservation Area Technical Advisory Committee on August 16, 2001.
- ▶ Butte County Supervisor and SRCAF Board Member, Jane Dolan, was notified of the original proposal submission on August 23, 2001 when TNC presented the grant proposal at the SRCAF Board of Directors meeting.
- ▶ TNC held a stakeholder meeting on August 27, 2001 to present the grant proposal. All local landowners in the project area were invited and numerous landowners and other interested parties were in attendance.
- ▶ TNC presented the grant proposal to the Sacramento River Conservation Area Technical Advisory Committee on September 19, 2001.
- ▶ TNC formally submitted grant proposal to CALFED ERP in October 2001.
- ▶ TNC purchased Singh property from private seller in March 2002; this purchase was not part of the CALFED ERP grant.
- ▶ TNC presented the CALFED ERP grant proposal to the Sacramento River Conservation Area Technical Advisory Committee on May 16, 2002.

- ▶ The Sacramento River Conservation Area Forum's Board of Directors sent the CALFED ERP a letter stating the revised grant proposal conforms to the SRCA Handbook. The letter was signed by Jane Dolan, Chairperson of the SRCAF Board of Directors and Butte County Supervisor. Letter dated October 28, 2002.
- ▶ TNC was awarded grant by CALFED ERP to purchase the Nicolaus property, and other possible properties for inclusion into the Bidwell-Sacramento River State Park, as well as restoration planning and permitting in March 2003.
- ▶ TNC received a letter from State Parks reaffirming their intent to purchase the Singh parcel. Letter dated February 23, 2004.
- ▶ TNC sold the Singh property to State Parks on August 12, 2004.
- ▶ TNC purchased the Nicolaus property in November 2005.
- ▶ TNC's original grant proposal to the CALFED ERP stated that all properties (including Nicolaus) purchased under the grant would go to State Parks as part of the Bidwell-Sacramento River State Park. Under State Park ownership, the properties would be restored and appropriate public use facilities would be put in place.

Public Noticing for the Bidwell-Sacramento River State Park Preliminary General Plan and EIR

Concurrent with TNC's CALFED ERP grant agreement work, State Parks prepared, circulated, and responded to comments on the BSRSP General Plan and EIR. Because the proposed project tiers from the BSRSP General Plan EIR, it is pertinent to explain the noticing and public outreach that occurred for the first-tier CEQA document. The following public notices and public meetings occurred during preparation of the BSRSP General Plan and EIR:

- ▶ A scoping public meeting was held on March 18, 2003 to announce the Bidwell-Sacramento River State Park Preliminary General Plan project and receive scoping comments on the environmental analysis, pursuant to CEQA.
- ▶ A second public meeting was held on July 30, 2003 that focused on presentation of several planning alternatives.
- ▶ Bidwell-Sacramento River State Park Preliminary General Plan and Draft EIR was published on December 12, 2003.
- ▶ A 45-day public review period for the Draft EIR was provided from December 12 to January 26, 2004.
- ▶ A public hearing on the proposed General Plan and Draft EIR was held on January 15, 2004.
- ▶ Bidwell-Sacramento River State Park Recirculated Draft EIR (Agricultural Resources) was published October 18, 2005
- ▶ A 30-day public review period for the Bidwell-Sacramento River State Park Recirculated Draft EIR (Agricultural Resources) was provided from October 18, 2005 to November 17, 2005.
- ▶ Bidwell-Sacramento River State Park Comments and Responses to Comments on the Recirculated Draft EIR was published in January 2006
- ▶ The Final EIR was certified and the General Plan was adopted by State Parks on March 10, 2006

Public Noticing for the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project EIR

The project-level CEQA analysis for the BSRSP Habitat Restoration and Outdoor Recreation Facilities Development Project involved the following public notices and public meetings. This noticing and public outreach information was provided in the Draft EIR, Section 1.5, “Comments on the Notice of Preparation” and Section 1.8, “Public Review Process.”

- ▶ Notice of Preparation (NOP) for the proposed Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project was distributed on August 28, 2007 to responsible agencies, interested parties, and organizations, as well as private individuals that may have an interest in the project.
- ▶ The NOP was filed with the State Clearinghouse and posted on the State Parks website on August 29, 2007.
- ▶ The NOP was mailed to agencies and members of the public on August 29, 2007.
- ▶ E-mail notification was provided to the Sacramento River Conservation Area Forum on August 30, 2007.
- ▶ Availability of the NOP was advertised in the Chico Enterprise Record on September 8, 2007.
- ▶ An announcement was made to the Sacramento River Conservation Area Forum technical advisory council on September 8, 2007.
- ▶ State Parks held a scoping meeting for the public and agencies the evening of September 19, 2007 at the Bidwell Mansion SHP Visitor Center at 525 Esplanade, Chico, CA 95926.
- ▶ Notice of Availability of the Draft EIR was published with the State Clearinghouse and Butte County Clerk on January 31, 2008.
- ▶ Direct mailing of the Notice of Availability of the Draft EIR to agencies and members of the public was done on January 31, 2008.
- ▶ Notice of Availability of the Draft EIR was published in the Chico Enterprise Record on January 31, 2008 and February 1, 2008.
- ▶ The Draft EIR was available for a 45-day public review period from January 31, 2008 to March 17, 2008. The Draft EIR was available on-line at State Parks’ website, at State Parks’ offices, at five local libraries, at The Nature Conservancy’s Chico office, and at Scotty’s Landing, located on River Road near the project site.
- ▶ State Parks held a public hearing on the Draft EIR for the public and agencies the evening of February 19, 2008 at the Bidwell Mansion SHP Visitor Center at 525 Esplanade, Chico, CA 95926.
- ▶ This Final EIR document includes the response to comments received on the Draft EIR during the public review period as well as any changes to the Draft EIR that resulted from those responses. The comments (in their entirety) and responses to the comments are provided in Chapter 8 of this Final EIR. Associated text changes are reflected throughout the Final EIR and are identified with a horizontal line in the margin of the page.

Comment number L1-2 specifically stated that State Parks failed to consult with and provide adequate notice to Butte County, as is required by CEQA. However, during the coordination and public comment periods described above, approximately eight Butte County offices were noticed and given the opportunity to attend public meetings and comment on Bidwell Sacramento River State Park planning. These included:

- ▶ Butte County Agricultural Commissioners
- ▶ Butte County Farm Bureau
- ▶ Butte County Air Quality Management District
- ▶ Butte County Clerk – Recorder
- ▶ Butte County Department of Developmental Services
- ▶ Butte County Department of Public Works
- ▶ Butte County Office of Emergency Services
- ▶ Butte County Planning Division

In addition, the Butte County Department of Public Works and the Butte County Farm Bureau provided comments on the project prior to the Butte County Board of Supervisors comment letter dated March 11, 2008. It is noted that the Board of Supervisors did not receive direct notice; in the future project-related notices will also be sent directly to the Board of Supervisors.

State Parks has considered all comments that were received in the planning process for the proposed project and, in many cases, has made changes to plans and documents related to the comments as explained in Common Response 1 and Chapter 3 of this Final EIR.

COMMON RESPONSE 3—ADEQUACY OF CEQA DOCUMENT

COMMON COMMENT

A number of commenters questioned the adequacy of the environmental analysis pursuant to CEQA. (See Comments L1-4, L1-45, L1-57, L1-68, L1-71, L1-90, L2-1, L2-2, L2-8, L3-2, L3-12, L3-13, L3-17, L3-20 and I6-15)

COMMON RESPONSE

According to CEQA, preparation of an EIR is required whenever it can be fairly argued, based on substantial evidence, that a proposed project may result in a significant environmental impact. An EIR is an informational document used to inform public-agency decision makers and the general public of the significant environmental impacts of a project, identify possible ways to minimize the significant impacts, and describe reasonable alternatives to the project that could feasibly attain most of the key project objectives reducing or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project.

The EIR for the BSRSP Habitat Restoration and Outdoor Recreation Facilities Development Project (SCH # 2007082160) is legally adequate according to the requirements of CEQA (Public Resources Code Sections 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Sections 15000 et seq.). The EIR is a tiered project-level EIR, as described in Section 1.3 of the EIR, and summarized below. This tiered EIR describes the existing conditions of the project site and surrounding lands, discloses the potential environmental impacts of the project (both on the project site and surrounding lands), identifies measures to minimize significant impacts, and describes reasonable alternatives to the project. Before adopting the project, State Parks, the lead agency, is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

Additionally, as described in Common Response 2, “Adequacy of CEQA Public Noticing,” State Parks, along with TNC, has engaged in agency and public coordination and outreach from the inception of the proposed project and has provided public noticing and comment periods as required by CEQA (State CEQA Guidelines Sections 15082, 15083, 15085, 15086, 15087, 15088, and 15105).

Tiered Project-Level EIR

As described in Section 1.3 of the EIR, CEQA permits an EIR for a project to tier off and rely on a more general EIR for a previously prepared program, plan, policy, or ordinance in instances where the later project would be consistent with the earlier program, plan, policy, or ordinance (Pub. Res. Code Section 21094 and State CEQA Guidelines Sections 15152 and 15385). Tiering promotes efficiency in the CEQA process by encouraging the lead agency to limit an EIR on a subsequent project to examining the significant effects that were not examined as significant effects in the prior EIR or are susceptible to substantial reduction or avoidance by specific revisions in the project (State CEQA Guidelines Section 15152). Section 1.3.1 of the EIR documents the review of the BSRSP General Plan and EIR (Park Plan) and that the proposed project is consistent with and implements the Park Plan goals. Because the project is consistent with the Park Plan goals, it is appropriate for the Park Plan to provide the more general, first-tier environmental document, allowing this EIR to focus on issues specific to the proposed project.

Because State Parks, the lead agency, had prepared and certified a first tier EIR for the BSRSP General Plan, the scope of this project EIR could be limited. By statute, the analysis need not “examine” those effects on the later project that:

- ▶ Have already been mitigated or avoided as part of the prior project approval, as evidenced in the findings adopted for the prior project; or
- ▶ Were “examined at a sufficient level of detail” in the prior EIR that they can “be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.” (Public Resources Code Section 21094[a]).

If the effects in question were examined at a sufficient level of detail in the prior EIR, State Parks need not generate additional information to devise necessary means to avoid or mitigate them, and such effect need not be addressed in the later environmental document. If, on the other hand, State Parks needs additional information to formulate the necessary revisions, conditions, or measures, then the effects should be addressed.

Section 4.1.1 of the EIR presents those environmental topics that were eliminated from further analysis through the General Plan EIR because there is no potential for significant environmental effects resulting from implementation of the project. These topics include Land Use and Planning; Mineral Resources; Population and Housing; and Recreation. Additionally, Section 4.1.2 addresses the environmental topics that were appropriately and adequately addressed by the General Plan EIR because the proposed project is consistent with Park Plan goals and guidelines and would result in less than significant effects to these resources. These environmental topics are aesthetics; geology and soils; hazards and hazardous materials; noise; transportation and traffic; and utilities and public services. A brief description for each of these topics is provided in Section 4.1.2 regarding why the proposed project is consistent with the Park Plan and why the project does not require further analysis.

State Parks determined the need, however, to further examine effects to Agricultural Resources; Hydrology, Water Quality, and River Geomorphology; Biological Resources; Cultural Resources; and Air Quality and Climate Change for this project. Therefore, these resources are analyzed in Sections 4.2 through 4.6 of the EIR, respectively. The analyses provide impact discussions with substantial evidence to support an impact determination. Where necessary, mitigation measures are also imposed. All required mitigation measures will be tracked in the Mitigation, Monitoring, and Reporting Program provided in Appendix G of this EIR.

Additionally, in response to comments on the Draft EIR, revisions and clarifications have been made to the Agricultural Resources and Hydrology, Water Quality and River Geomorphology analyses (see Sections 4.2 and 4.2 of this EIR). Specifically, clarifications were provided in Section 4.2 regarding Butte County agricultural policies and in Impact 4.2-b regarding the process for non-renewal of the Williamson Act contract on the Nicolaus property. Impacts 4.2-b remains less than significant, with no mitigation required. Please refer to Common Response 4 and Common Response 5, below, for further information in response to comments on the

EIR analysis of agricultural resource impacts. The Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties (see Appendix B of this EIR) was also revised to include not only the Sacramento River, but also flows from Mud Creek and Big Chico Creek. The revised analysis, considering changes to the project description (see Chapter 3 of this EIR) and these tributaries in addition to the Sacramento River, again found that the project would result in less-than-significant impacts related to both flood water elevations and the velocity of water flow during flood events. Please refer to Common Response 6, below, for a description of the revised hydraulic analysis and the project's effects on flood water elevation and flood flow velocity. As shown in Chapter 4 of this Final EIR, the revisions and clarifications to the environmental analysis did not change the level of significance of the environmental impacts of the project; do not require new or additional mitigation measures; and therefore, do not warrant recirculation of the Draft EIR.

COMMON RESPONSE 4—IMPACTS TO AGRICULTURAL OPERATIONS

COMMON COMMENT

Multiple commenters expressed the opinion that the effects to agricultural resources were inadequately analyzed in the Draft EIR. Commenters expressed concern about several topics related to the impact the project would have on agricultural resources, including: Butte County policies (i.e., Butte County General Plan, Chico Area Greenline, and Butte County Right to Farm Ordinance), direct effects to agricultural resources (i.e., land use changes), and indirect effects to agricultural resources (compatibility with neighboring agricultural operations, buffers, pests, trespass). Response to the comments for these topic areas are addressed by this common response.

(See Comments L1-3, L1-8, L1-14 through L1-28, L1-39 through L1-44, L1-50, L1-64 through L1-66, L1-71, L1-77, L1-79, L1-80, L1-82, L1-87, L1-96, L1-97, L2-1, L2-3, L2-4, L2-6 through L2-10 and L2-16, L3-16, PH-1, PH-2, PH-12, and PH17-19)

COMMON RESPONSE

Butte County Agricultural Policies

The project is proposed by, and would be implemented by, State Parks. State agencies are not subject to local or county land-use plans, policies, and zoning regulations (Hall vs. City of Taft [1952] 47 Cal.2d 177; Town of Atherton v. Superior Court [1958] 159 Cal.App.2d 417; Regents of the University of California v. City of Santa Monica [1978] 77 Cal. App.3d 130). However, State Parks seeks to work cooperatively with local jurisdictions to resolve land use issues, if they arise. Under CEQA, an EIR must consider the extent to which a project is inconsistent with “applicable general plans” (State CEQA Guidelines Section 15125, subd. [d]; see also State CEQA Guidelines Appendix G, IX[b]). In this case, because State Parks is a State agency that is not subject to local land-use regulations, land-use plans, policies and regulations adopted by Butte County are not applicable to the project. For this reason, this EIR need not, as a matter of law, consider such plans, policies, and regulations.

Nevertheless, in the exercise of its discretion and the interest in working cooperatively with local jurisdictions, State Parks does reference, describe, and address local land-use plans, policies, and regulations that are applicable to the project. State Parks takes this approach in recognition that such plans, policies, and regulations reflect the local community's policy decisions with respect to appropriate uses of land in the area. Consideration of these plans, policies and regulations, therefore, assists State Parks in determining whether the proposed project may conflict with nearby land uses that could result in potentially significant environmental impacts.

Section 4.2.2, “Regulatory Setting,” which describes federal, state, and local agricultural policies and regulations applicable to the project, was revised in this Final EIR to provide a more thorough description of the Agricultural Element of the Butte County General Plan, the Chico Area Greenline Policy contained in the Land Use Element of the Butte County General Plan, and the Butte County Right to Farm Ordinance. The revised section reads as follows.

Butte County General Plan

Butte County addresses the protection of agriculture in its General Plan as follows:

Agricultural Element

Recognizing the importance of protecting and maintaining agriculture as a continuing major part of the local economy and way of life in Butte County, the Board of Supervisors directed the preparation of an Agricultural Element to the General Plan (Butte County 1995). The Agricultural Element was adopted on May 9, 1995, establishing policies designed to achieve four main purposes:

- ▶ to preserve agricultural lands for continued agricultural uses;
- ▶ to strengthen and support the agricultural sector of the economy;
- ▶ to protect the natural resources that sustain agriculture in Butte County; and,
- ▶ to consolidate agricultural policies required in mandated general plan elements into one document.

The Agricultural Element describes several issues and challenges affecting the viability of agriculture in Butte County, such as leapfrog development, subdividing agricultural parcels into smaller units, conversion of agricultural land to urban development or rural residential “ranchettes,” trespass and vandalism, environmental regulations, and water availability. The Agricultural Element addresses these issues through specific goals, policies, and programs to ensure continued agricultural productivity unhindered by development pressures. The goals set the ideal for the element, and include the following:

- Goal 1.** Maintain parcel sizes that ensure the long-term preservation, conservation and continuity of those general plan areas identified as Orchard and Field Crops and Grazing and Open Lands.
- Goal 2.** Conserve and stabilize agricultural land uses at city and community boundaries in order to protect agricultural lands from encroachment and conversion to urban uses.
- Goal 3.** Support the management of agricultural lands in an efficient, economical manner, with minimal conflict from non-agricultural uses.
- Goal 4.** Encourage environmental resource protection measures to ensure the continued agricultural use of the land.
- Goal 5.** Seek and support preservation policies and programs to protect long-term agricultural production.
- Goal 6.** Seek measures to preserve and maintain agriculture and encourage new agricultural industries and operations.
- Goal 7.** Support appropriate amounts of farm worker and farm family housing in agriculturally zoned areas.

Land Use Element

The Land Use Element of the Butte County General Plan, as adopted by Resolution 79-222, on October 30, 1979, contains the Chico Area Greenline Policy (Butte County 1979). The policy establishes and defines the “Chico Area Greenline” as the established boundary line which separates urban/suburban land uses from agricultural land uses in the Chico area. The stated purposes of the policy are as follows:

- ▶ To define the limits of future urban development which may occur on agricultural lands in the Chico Area of Butte County.
- ▶ To provide for the long-term protection of agricultural resources of the Chico Area of Butte County.

- ▶ To mitigate the threat to agricultural resources posed by urban encroachment into and conversion of agricultural lands in the Chico Area of Butte County.
- ▶ To reduce agricultural/urban conflicts in the Chico Area of Butte County.
- ▶ To establish County cooperation with the City of Chico in land use planning of urban and agricultural lands located in the Chico Area of Butte County.
- ▶ To identify urban development limits in or near agricultural lands within the County’s Chico Area Land Use Plan by use of a certain bold dashed boundary line.
- ▶ To establish a certain and clear policy text for Butte County’s Chico Area Land Use Element, which will enhance and uphold the aforementioned boundary line and policy text.
- ▶ To establish certain land use designations for the Chico Area of Butte County in conformity with the aforementioned boundary line and policy text.

In order to implement the Chico Area Greenline Policy, properties on the agricultural side of the boundary line were zoned or rezoned to support the policy. The policy stipulates that all land uses on the agricultural side of the Chico Area Greenline consist solely of Agricultural land uses as provided by the Orchard and Field Crop designation, except for Agricultural Residential land uses.

Butte County Right to Farm Ordinance

In 1981, the Butte County Board of Supervisors adopted the Butte County Right to Farm Ordinance (Right to Farm Ordinance). The purpose and intent of the Right to Farm Ordinance is to limit the circumstances under which properly conducted agricultural operations on agricultural land in Butte County may be considered a nuisance, as well as:

“... to promote a good-neighbor policy by requiring notification of owners, purchasers, residents, and users of property adjacent to or near agricultural operations on agricultural land of the inherent potential problems associated with being located near such operations, including, without limitation, noise, odors, fumes, dust, smoke, insects, operation of machinery during any time of day or night, storage and disposal of manure, and ground or aerial application of fertilizers, soil amendments, seeds and pesticides. It is intended that, through mandatory disclosures, owners, purchasers, residents and users will better understand the impact of living or working near agricultural operations and be prepared to accept attendant conditions from properly conducted agricultural operations as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector.”(35-2[c])

The Right to Farm Ordinance further states that:

“No agricultural operation conducted or maintained on agricultural land in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the county, shall be or become a nuisance for purposes of this code or county regulations if it was not a nuisance when it began, provided that such operation complies with the requirements of all applicable federal, state, and county statutes, ordinances, rules, regulations, approvals and permits. The provisions of this section shall not apply where a nuisance results from the negligent or improper management or operation of an agricultural operation. (Ord. No. 3965, § 6, 6-12-07)” (35-6)

Direct and Indirect Impacts to Agricultural Resources

A number of commenters expressed the opinion that the project would have direct and indirect impacts on neighboring agricultural operations that were not adequately disclosed or analyzed in the Draft EIR. Section 4.2.4,

“Impact Analysis” of the EIR thoroughly and adequately discloses and analyzes the potential direct and indirect impacts the project would have on agricultural resources. The analysis in Section 4.2 is based on a review of agricultural characteristics of lands in the study area (Exhibit 4.2-1 of the EIR). It is further based on consideration of proposed project actions that could result in adverse physical changes to the environment or in the degradation of physical attributes that historically supported native riparian habitat and that have supported agricultural production in more recent times. The methodology and conclusions of this analysis are consistent with the Recirculated EIR for the Preliminary General Plan (Agricultural Resources) (October 2005) for the Bidwell-Sacramento River State Park General Plan (Park Plan), which presented a thorough analysis of the potential impacts to agricultural resources resulting from the implementation of the Park Plan.

The discussion in Impact 4.2-a of the EIR explains that the project would result in a change in land use in areas designated as “Irrigated Farmland,” which are currently in agricultural production. The Singh Unit would be restored to natural vegetation conditions with a trail connecting to other BSRSP facilities. The Nicolaus property would support a combination of restored natural vegetation and low-intensity, outdoor recreation uses. This change in land use could have a minor economic effect related to a reduction of local crop production. However, pursuant to CEQA Guidelines Section 15382, an economic or social change by itself is not considered a significant effect on the environment. As described in Section 4.2 of the EIR, 464,308 acres are in agricultural production in Butte County, of which almonds and walnuts accounted for 74,942 acres (Butte County 2007a). The Singh Unit and Nicolaus property orchards (totaling approximately 170 acres of agricultural production) account for approximately 0.2% of Butte County’s almond and walnut orchards and approximately 0.04% of land in agricultural production. However, the change from commercial crops to non-commercial, natural habitat (i.e., the change from walnuts to native vegetation) would not substantially diminish the land, soils or open space values of the physical resource, nor would they preclude future agricultural use of the land or preclude nearby agricultural uses.

The proposed riparian habitat restoration and outdoor recreation facilities on the Singh Unit and the Nicolaus property do not fit the definition of urban and built-up land and the planned uses do not constitute “conversion” to development as described in Impact 4.2-a. Furthermore, the ultimate physical conditions of the Singh Unit and the Nicolaus property resulting from the proposed project would be protective of agricultural land values, as considered by the procedures implementing the FPPA. The vast majority of the Singh Unit and Nicolaus property would be restored to native riparian habitat under the proposed project. Unlike urban development, natural vegetation restoration would represent a return to the land’s original (natural) physical condition, as part of a riparian corridor, which offers long-term natural process and function benefits, including the natural formation of soils that provide these sites with their current resource and agricultural values. Because the resource value of the soil is tied directly to the natural conditions and processes that existed prior to commercial agricultural cultivation, native vegetation restoration efforts would, in effect, be preserving (and possibly improving over time) the soil integrity (Cannon 2004). Therefore, the project does not constitute a conversion of farmland resulting in potentially significant adverse environmental impacts as defined in CEQA and the State CEQA Guidelines.

Also described in Impact 4.2-a, consistent with Park Plan Guideline AO-3.2-1, the proposed recreational facilities have been designed such that they would minimize alteration of the natural landform and they would be compatible with the open space values of the area, including the resource values that support agricultural productivity. The proposed outdoor recreational facilities, which include standard trails/campground/day-use features and ancillary facilities (e.g., parking, restrooms, etc.), would include minimal paving and limited small structures. Additionally, in response to comments on the Draft EIR, State Parks removed the proposed RV campgrounds from the recreation facilities plans, further reducing the footprint of proposed facilities. Therefore, proposed recreational facilities would be sufficiently limited in nature (i.e., small areas used for trails, parking, and camping that could be readily demolished and removed), such that it would be feasible to return the lands to another resource-based use, such as agricultural production, at some future time. Consequently, the development of the proposed outdoor recreation facilities would not constitute agricultural land conversion to development in the sense of the environmental impact concerns of CEQA. Furthermore, Impact 4.2-a explains that project has considered and incorporated measures to avoid indirect impacts to neighboring agricultural lands. Based on the

substantial evidence provided in Section 4.2 of the EIR, State Parks concludes that the proposed project would result in a less-than-significant impact on agricultural resources within the intended meaning of CEQA and the CEQA Guidelines.

Please also refer to Common Response 3, “Adequacy of CEQA Document,” and Common Response 7, “Buffer Zones.”

COMMON RESPONSE 5—IMPACTS TO LANDS UNDER WILLIAMSON ACT CONTRACT

COMMON COMMENT

Multiple commenters expressed concern regarding whether or not State Parks would follow the proper process for nonrenewal or cancellation of the Williamson Act contract on the Nicolaus property.

(See Comments L1-28, L1-29, L1-80, L1-95, L1-97, L2-1, L2-5, L2-11, L3-11 through L3-15 and PH-10)

COMMON RESPONSE

Section 4.2.2, “Regulatory Setting” has been revised in this Final EIR to more accurately describe Butte County Williamson Act procedures. The portion of Section 4.2.2 regarding the Williamson Act is revised as follows:

CALIFORNIA LAND CONSERVATION ACT OF 1965 (WILLIAMSON ACT)

Since 1965 the State has encouraged landowners to protect agriculture and open space lands via the California Land Conservation Act of 1965, commonly referred to as the Williamson Act. The State of California Department of Conservation (DOC) is responsible for interpretation and enforcement of Williamson Act restrictions and provisions. Under this law, agricultural, recreational, and other related open space uses are protected when the landowner enters into a restrictive use contract with the local administering government. As an incentive for enrolling their land in the program, landowners receive a reduction in property tax liability. Counties benefit when they formally adopt the program because they are then able to claim “Open Space Subvention Act Payments” that partially replace property tax losses associated with Williamson Act enrollees. The Williamson Act program is intended to preserve farmland, although a landowner could have other activities on the same land, including a permitted mining operation, a hunting club (without permanent facilities), or processing operations for agricultural products. Williamson Act contracts have a 10 year renewable contract term. Butte County administers the Williamson Act Program in Butte County. *Resolution 07- 021 of the Board of Supervisors of the County of Butte: Butte County Administrative Procedures and Uniform Rules for Implementing the California Land Conservation (Williamson) Act* (Butte County Williamson Act Procedures) (Butte County 2007b) identifies the Butte County Department of Development Services, Planning Division as the lead County department for all Williamson Act program management, including applications, Williamson Act contract non-renewals, and contract cancellations.

The discussion of the Williamson Act Contract Process in Impact 4.2-b in this Final EIR has been revised as follows to clarify the process that will be followed for nonrenewal:

Williamson Act Contract Process

The Singh Unit is not in a Williamson Act contract. However, the Nicolaus property (approximately 146 acres) is currently in a Williamson Act contract. TNC and State Parks will adhere to the local and state regulations for lands under a Williamson Act contract.

State Acquisition of Land under Williamson Act Contract – Value to the Public

Rule 6(F) of the Butte County Williamson Act Procedures (Butte County 2007b) provides guidance for the County in situations when land under Williamson Act contract is acquired by the State. Rule 6(F) reads as follows:

Public Acquisition. Williamson Act contracts become void for land that is acquired by a federal, state or local government agency for necessary public uses and facilities. The California Land Conservation Act of 1965 contains policies and restrictions to avoid public acquisition of lands in agricultural preserves, with special emphasis on restricting acquisition of land subject to Williamson Act contracts or containing prime agricultural land. State and local government agencies are required to refer proposals to acquire land in agricultural preserves to the State Department of Conservation for their review and response prior to acquisition.

As stated in Government Code Section 51290(a)(b), “it is the policy of the state to avoid, whenever practicable, the location of any federal, state, or local public improvements...and the acquisition of land therefore, in agricultural preserves,” and “that whenever it is necessary to locate such an improvement within an agricultural preserve, the improvement shall, whenever practicable, be located upon land other than land under a [Williamson Act] contract.” Furthermore, a public agency proposing to acquire and/or locate improvements on land under Williamson Act contract, shall “give consideration to the value to the public...of land...within an agricultural preserve.” (Section 51290[c]).

In determining the value to the public, the Legislature finds (Section 51220):

- (a) That the preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the state’s economic resources, and is necessary not only to the maintenance of the agricultural economy of the state, but also for the assurance of adequate, healthful and nutritious food for future residents of this state and nation.
- (b) That the agricultural work force is vital to sustaining agricultural productivity; that this work force has the lowest average income of any occupational group in this state; that there exists a need to house this work force of crisis proportions which requires including among agricultural uses the housing of agricultural laborers; and that such use of agricultural land is in the public interest and in conformity with the state’s Farmworker Housing Assistance Plan.
- (c) That the discouragement of premature and unnecessary conversion of agricultural land to urban uses is a matter of public interest and will be of benefit to urban dwellers themselves in that it will discourage discontinuous urban development patterns which unnecessarily increase the costs of community services to community residents.
- (d) That in a rapidly urbanizing society agricultural lands have a definite public value as open space, and the preservation in agricultural production of such lands, the use of which may be limited under the provisions of this chapter, constitutes an important physical, social, esthetic and economic asset to existing or pending urban or metropolitan developments.
- (e) That land within a scenic highway corridor or wildlife habitat area as defined in this chapter has a value to the state because of its scenic beauty and its location adjacent to or within view of a state scenic highway or because it is of great importance as habitat for wildlife and contributes to the preservation or enhancement thereof.
- (f) For these reasons, this chapter is necessary for the promotion of the general welfare and the protection of the public interest in agricultural land.

In consideration of the value to the public of the proposed project pursuant to Section 51220, State Parks could make the following findings. The proposed project is consistent with State Parks' Central Valley Vision process, which provides recommendations for park acquisition, development, and program activities over a 20-year planning horizon (DPR 2007). During the Central Valley Vision planning process, which began in 2003, State Parks found that there are significant resource protection and recreational opportunities and programs in the Central Valley through which State Parks can better serve the needs of Valley residents and visitors (DPR 2007). Recognizing and responding to the rapid population growth anticipated in the Central Valley over the next 20–30 years, the dearth of State Park facilities in the Central Valley, and the increasing diversity of visitor needs and interests, State Parks is working to expand and improve park facilities and recreation programs at Central Valley State Park System units, including BSRSP. Public input during the Central Valley Vision planning process found a strong interest in river access with adjacent day-use and camping facilities, as well as preservation of riparian habitat (DPR 2007). Acquisition of the Nicolaus property, and subsequent habitat restoration and development of outdoor recreation facilities would address public interests expressed during State Parks' Central Valley Vision planning process. Additionally, as discussed in Sections 3.1.3, 3.1.4, and 3.3.1 of this EIR, the proposed project is a product of a number of policies, programs and activities focused along the Sacramento River over the last 20 years at multiple levels of government. The implementation of these programs represents a significant public investment in the protection and restoration of riparian habitat. The efforts began in 1986, when the State of California legislature passed into law SB 1086, calling for development of a management plan for the Sacramento River and its tributaries. This set into motion an effort to protect, enhance and restore fisheries and riparian habitat that has become a model for the State. SB 1086 resulted in publication of the *Sacramento River Conservation Area Forum Handbook* (SRCA Forum 2003) that contains a set of principles and guidelines for habitat management along the river. SB 1086 also led to the formation of a nonprofit organization, the SRCA Forum, to coordinate the habitat restoration efforts along the river in accordance with guidance in the SRCA Forum Handbook.

Notification of Intent to Locate Public Improvement on Property under Williamson Act Contract

State Parks would acquire the Nicolaus property as a gift from TNC. Prior to the transfer of the Nicolaus property from TNC to State Parks, State Parks would advise the Director of Conservation and Butte County of its intention to consider the location of a public improvement within property under Williamson Act contract (pursuant to Section 51291[b]). “In accordance with Section 51290, the notice shall include an explanation of the preliminary consideration of Section 51292, and give a general description, in text or by diagram, of the agricultural preserve land proposed for acquisition, and a copy of any applicable [Williamson Act] contract” (Section 51291[b]). The Director of Conservation would then forward a copy of the notice to the Secretary of Food and Agriculture for comment. Within 30 days, the Director of Conservation and Butte County would forward their comments with respect to the effect of the location of the public improvement on the land within an agricultural preserve to State Parks for their consideration (Section 51291[b]). Following acquisition of the Nicolaus property by State Parks, State Parks “shall notify the Director of Conservation within 10 working days. The notice shall include a general explanation of the decision and the findings made pursuant to Section 51292” (Section 51291[c]). As stated in Government Code Section 51292, it is the policy of the state that public agencies cannot locate public improvements in agricultural preserves unless specific findings can be made:

1. The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve. (Section 51292[a])
2. If the land is agricultural land covered under a [Williamson Act] contract for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement (Section 51292[b])

The project facts support the first finding (pursuant to Section 51292[a]) because the selection of the Nicolaus property was based on the location near the confluence of the Sacramento River, Big Chico Creek, and Mud Creek; the location relative to BSRSP; the potential the site offers to rehabilitate natural river processes, aid

recovery of special-status species, restore riparian habitat, and improve water quality; and a willing seller. The property represents the potential expansion of BSRSP, including expansion of native riparian habitat in the Park (and within the greater area of protected and restored habitat along the Sacramento River between river mile [RM] 199 and RM 193) and the expansion and improvement of recreational facilities.

Project facts also support the second (pursuant to Section 51292[b]) findings. As the purpose of the project, including the land transfer from TNC to State Parks, is both restoration of native riparian habitat and expansion of the BSRSP, the property needs to be adjacent to existing BSRSP property and offer an opportunity to restore riparian habitat. The Nicolaus property is located directly across River Road from the Indian Fishery Subunit and north of the Big Chico Creek Riparian Area Subunit (which includes the Singh Unit), separated by a privately owned orchard and field crops. These two subunits, totaling 240.6 acres, represent 89% of the total land that composes the BSRSP. New recreation facilities, such as trails and campground, would connect to and support the use of other existing facilities in BSRSP. Additionally, the existing farm complex would provide the ability to relocate the BSRSP headquarters to higher, less frequently flooded ground. The location of the project near the confluence of the Sacramento River, Big Chico Creek, and Mud Creek provides a unique habitat restoration opportunity. Additionally, the property is located adjacent to lands that are part of DFG's Sacramento River Wildlife Area, and proximate to USFWS lands that are part of the Sacramento River National Wildlife Refuge. The Nicolaus property, similar to these neighboring public lands, is located within the Sacramento River Conservation Area (SRCA). The proposed project would support the SRCA goal to "preserve remaining riparian habitat and reestablish a continuous riparian ecosystem along the Sacramento River between Redding and Chico and reestablish riparian vegetation along the river from Chico to Verona." Furthermore, the Nicolaus property, which is owned by TNC, has an owner willing to transfer the land to State Parks as a gift (i.e., State Parks would not purchase the Nicolaus property from TNC). Due to the large amount of land in public ownership in the vicinity of BSRSP, and the lack of private land owners willing to sell land adjacent to BSRSP, another location was not identified that could meet these criteria.

Notice of Nonrenewal of the Williamson Act Contract

Pursuant to Rule 6(A) of the Butte County Williamson Act Procedures (Butte County 2007b), either TNC (prior to the land transfer) or State Parks (following the land transfer) would serve written notice of nonrenewal of the Williamson Act contract for the Nicolaus property to DOC and Butte County, which would release State Parks from the contract after the ninth year following the year the notice of nonrenewal is submitted. During the nonrenewal period, State Parks would conduct activities consistent with the Williamson Act contract.

As of 2005 (the most recent data available), a total of 215,248 acres were enrolled in the Williamson Act Program in Butte County (DOC 2006). The nonrenewal of the Williamson Act contract for the Nicolaus property (approximately 146 acres) would represent a 0.07% decrease in the total acreage under Williamson Act contract in Butte County. Based on the information presented above, State Parks concludes that the proposed project would result in a less-than-significant impact on agricultural resources within the intended meaning of CEQA and the CEQA Guidelines.

Land Use Compatibility with Agriculture and Williamson Act Contracts

The proposed habitat restoration and outdoor recreational uses at the project site would be compatible with surrounding agriculture land uses, based on existing federal and state laws and programs for farmland protection. As described in Impact 4.2-a, the Federal FPPA indicates that non-agricultural uses are urban uses, which detract from agricultural land values in the rating system, while "non-urban uses," which create or protect agricultural land values, include non-paved parks and recreational areas. Based on the characteristics of the proposed habitat restoration and outdoor recreation facilities, the project would qualify as non-urban uses, which the FPPA considers to be protective of and compatible with agricultural values. The Williamson Act also contains numerous provisions that recognize the compatibility between agricultural and recreation/open space uses. The definitions included in the statute are the first indication of such compatibility. It defines an "agricultural preserve" as an area

devoted to either agricultural use, recreational use, open space use, or any combination thereof (California Government Code Section 51201(d)). Also, “recreational use” is defined as the use of the land in its agricultural or natural state by the public, with or without charge, for a range of listed uses, including, but not limited to walking, hiking, picnicking, camping, swimming, boating, fishing, and other outdoor sports (California Government Code Section 51201(n)). Finally, “compatible use” is defined as any use determined to be compatible with the agricultural, recreational, or open space use of the land within the preserve (California Government Code Section 51201(e)). The habitat restoration and recreational facilities proposed are considered compatible with agriculture and therefore should have no significant adverse effects on neighboring farmland production. Furthermore, per the goals and guidelines under Park Plan Overall Goal AO-4, State Parks has incorporated design features (e.g., grassland buffers) into the habitat restoration and recreation facility plans to minimize land use incompatibilities and has/will coordinate with public and private landowners in the project vicinity to minimize land use conflicts. Park Plan guidelines also address fire protection and law enforcement at the Park (see Chapter 3, “Description of the Proposed Project”) to minimize incompatibilities with active agricultural operations on adjacent properties.

The definitions described above are reinforced in Section 52105 of the Williamson Act, which states that land devoted to recreational use...may be included within an agricultural preserve (California Government Code Section 51205). In outlining the purpose of the Williamson Act, the statute states that the discouragement of premature and unnecessary conversion of agricultural land to urban uses is a matter of public interest (California Government Code Section 51220(c)); there is no reference to other non-urban uses, such as low-intensity rural outdoor recreation, such as those that result from the proposed project. The clearest evidence for compatibility between agriculture and the habitat restoration and recreational facilities proposed at the project site are found in the principles of compatibility presented in Section 51238.1 of the statute. It states that uses approved on contracted lands, such as those proposed for the project site, will not significantly compromise the long-term agricultural capability of the subject contracted parcel in agricultural preserves (California Government Code Section 51238.1(a)(1)). The proposed project, and goals and guidelines of the Park Plan, strive to maintain physical conditions of the land that create resource values, including future agricultural and open space capabilities. Therefore, the habitat restoration and recreational facilities proposed are considered compatible with surrounding agriculture land use this impact is considered less than significant.

COMMON RESPONSE 6—REVISED FLOOD NEUTRAL HYDRAULIC ANALYSIS

COMMON COMMENT

A number of commenters expressed concern that the *Flood Neutral Hydraulic Analysis* for the Nicolaus and Singh Properties, dated December 12, 2007, included in Appendix B of the Draft EIR, focused on flood flows from the Sacramento River and did not include flood flows from Mud Creek and Big Chico Creek. Commenters noted that flood waters from Mud Creek, Big Chico Creek and their tributaries impact the project site and neighboring properties and that they need to be considered in the hydraulic analysis. Commenters also expressed concern regarding the roughness (density of vegetation) of the proposed riparian habitat and associated changes to flood levels and the velocities of flood flows through the project site and neighboring properties. (See Comments L1-6, L1-33 through L1-36, L1-58, L1-72, L1-85, L1-86, L1-9, L2-2, L3-4, L3-6 through L3-8, L3-10, L3-12, L3-13, L3-17, I2-5 through I2-7, I6-7, I6-18 through I6-20, I6-25, I7-3, I7-7, PH-2 through PH-4 and PH-15).

COMMON RESPONSE

The *Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties*, prepared to determine the hydraulic effects of the project on the floodplain, including the project site as well as surrounding private and public lands, has been revised in response to comments on the Draft EIR. The revised report, dated May 30, 2008, is included in Appendix B of this Final EIR. Key revisions to the report include the following:

- ▶ Inclusion of the lower three miles of Mud Creek (which includes the tributary flows from Rock Creek, Lindo Channel and Kusal Slough) and Big Chico Creek, in addition to the Sacramento River, in the 2-dimensional hydraulic model (see Figure 1 of the revised report);
- ▶ The Mud Creek model limit extends north of the project area (see Figure 1 of the revised report), modeled flows for this portion of Mud Creek are the USACE design flows of 15,000 cubic feet per second (cfs);
- ▶ The Big Chico Creek model limit extends east of the project area (see Figure 1 of the revised report), modeled flows for this portion of Big Chico Creek are the USACE design flows of 7,000 cfs;
- ▶ The Sacramento River model limits were reduced to RM 191 to 196.5 (see Figure 1 of the revised report);
- ▶ Removal of the RV campground from the conceptual recreation plans and instead including that area in the habitat restoration plan as oak savannah habitat; and
- ▶ Reduction in the proposed maximum density of revegetation from 198 to 132 planting locations per acre in the forested habitat types, and 50 plants per acre in the oak savanna and the recreation facilities area.

The *Hydraulic Analysis for Flood Neutrality on the Nicolaus and Singh Properties, Sacramento River, Mud Creek, and Big Chico Creek, May 30, 2008* (see Appendix B), had the following results and conclusions:

- ▶ At the modeled flow, the velocity contours in Figures 6 and 7 of Appendix B show that the flood flow velocity is between 0.0 and 3.5 feet per second (ft/s) in the project areas for both the existing condition and the with-project condition.
- ▶ The largest change in velocity due to the project would be an increase of up to 2.0 feet per second within the swale that runs north-south in the western half of the Singh Unit. This increase in velocity would be due to the conversion from orchard to meadow grasses in the natural low-lying swale. The existing velocity in that area is roughly 1.0 ft/s, and as long as the passageway remains vegetated, this increase should not have any harmful effects.
- ▶ The project would also result in velocity increases on the Singh Unit adjacent to Mud Creek of up to 0.5 ft/s (from 0.5 ft/s to 1.0 ft/s) due to the removal of the berm adjacent to Mud Creek. The removal of the berm from the southwestern boundary of the Singh Unit would cause an increase in that area of up to 0.7 ft/s (from 0.7 ft/s to 1.4 ft/s), but would also slightly reduce the velocity on the east bank of the Sacramento River adjacent to the site.
- ▶ The proposed grassland buffers would cause an increase in flood flow velocity on the west side of the Singh Unit and Nicolaus property, with the greatest increase being 1.2 ft/s (from 1.0 ft/s to 2.2 ft/s) at the southwestern boundary of the Nicolaus property.
- ▶ Small increases in flow velocity (0.25 to 1.0 ft/s) would also be anticipated for the oak savannah area near the planned recreational facilities on the Nicolaus property.
- ▶ The hydraulic modeling analysis shows very little change in water surface elevations within the modeled area (Figure 1 of Appendix B). The modeling predicted that the project would not result in any increases to water surface elevation, but would result in a small section of decrease of approximately 0.10 foot near the oak savannah habitat zone on the Nicolaus property.

Based on these results, as presented in Impact 4.3-a of this Final EIR, the potential project-induced changes in surface water elevation during flooding conditions would continue to be small, localized, and would not increase the area inundated by flood flows. Therefore, this impact is still considered less than significant. Additionally, as presented in Impact 4.3-b of this EIR, the project-related changes in vegetation and land use cover types

(recreational facilities) are not expected to substantially alter sediment transport and deposition within the project area. The restoration of native riparian habitat in the project area on lands that once supported a naturally functioning riverine ecosystem is considered beneficial for reducing the direct and indirect adverse effects of erosion and sediment deposition in the river. Minor changes in geomorphic processes (flood flow velocities) resulting from proposed project activities would be less than significant. Therefore, based on the revised *Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties* (May 30, 2008), the project's impact to water surface elevations (Impact 4.3-a) and flood flow velocities (Impact 4.3-b) would be less than significant. Please refer to Section 4.3 of this EIR for the associated revisions to the EIR text.

COMMON RESPONSE 7—BUFFER ZONES

COMMON COMMENT

Local agencies as well as private land owners expressed concern regarding the adequacy of the proposed grassland buffer zones in the proposed project. Concerns related to sufficient buffer area to prevent pest impacts to neighboring agricultural land; buffer related to human trespass; and buffers required by Butte County Code. (See Comments L1-17, L1-79, L1-87, L2-7, I2-3, I6-3, I6-28, I6-30, I6-32, I7-2, PH-1 and PH-18).

COMMON RESPONSE

Comments regarding the proposed grassland buffers for the BSRSP Habitat Restoration and Outdoor Recreation Facilities Development Project were received during the scoping period for the Draft EIR and addressed in Appendix A, "Scoping Comments and Responses." Due to additional comments regarding buffer zones received on the Draft EIR, the following information is provided to further respond to the public's concerns.

Buffer Related to Pests

The restoration plans for the proposed project include grassland buffers where the project site boundary is adjacent to agricultural land. As discussed in Chapter 3, "Description of the Proposed Project," and illustrated in Exhibits 3-7 and 3-8 of the EIR, the buffer would be approximately 100-feet wide and would be managed to prevent woody species establishment.

Potential pests that could affect crops and agricultural operations could include threatened or endangered species, invasive nonnative plant species, or wildlife (such as California ground squirrel, California vole, and lygus bug). The EIR determined that a 100-foot wide grassland buffer would be sufficient to protect adjacent agricultural operations from pests for the following reasons:

- ▶ The proposed habitat restoration plans do not include planting any threatened or endangered plant species.
- ▶ Black walnut volunteers (an invasive nonnative species) would be discouraged as part of State Parks maintenance of the vegetation.
- ▶ The grassland buffers would be managed to prevent the establishment of woody species, including elderberry shrubs.
- ▶ The *Colusa Pest and Regulatory Effects Study* (EDAW 2007) found that open grass areas may provide habitat for pests such as California ground squirrel, California vole, and lygus bug (aka western tarnish bug) as opposed to closed canopy riparian habitats (e.g., riparian forests). Therefore, providing a larger open grass area could exacerbate these types of pest problems rather than minimize them.

Buffer Related to Human Disturbances

The boundaries between the project site, which would be part of State Park's BSRSP, and private property would be clearly posted, consistent with Guideline AO-1.1-2 and AO-4.4-1 of the Park Plan. The northern boundary of the Singh Unit and the four corners (NW, NE, SW, SE) of Nicolaus property have been surveyed and marked (April 2008). The survey plat has been recorded with Butte County. State Parks would post "Park Boundary" signs as well as "No Trespass" signs along the project site boundaries with private lands. State Parks plans on locking the gate at the day use area (located at the current site of the Park headquarters) from sunset to sunrise. Additionally, State Parks will consider additional measures to prevent trespass such as appropriate fencing or natural barriers, subject to regulatory approval.

As part of BSRSP, the project site would be managed and maintained consistent with the Park Plan goals and guidelines, including coordinating with public and private landowners in the project vicinity to minimize land use conflicts (Park Plan Overall Goal AO-4). Please refer to "Law Enforcement" in Section 3.4.2 of the EIR. Public safety and emergency services are the primary responsibility of the State Park Peace Officers who are California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These Peace Officers patrol State Parks and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. Additionally, consistent with the Park Plan Goal AO-4.4, State Parks will work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area. Please also refer to Common Response 4, "Impacts to Agricultural Operations," for information regarding the project's potential indirect effects to agricultural resources (compatibility with neighboring agricultural operations, buffers, pests, trespass).

Buffer Related to Butte County Code

Comment number L1-17 in the Butte County Board of Supervisor's comment letter states,

"Where development approval, other than residential, is proposed on lot(s) adjacent to an agricultural operation or Orchard and Field Crops land use category, the Zoning Ordinance shall require a natural or man-made buffer between the development and agricultural land use. The buffer shall be totally on the lot(s) where development is proposed. A buffer could be a topographic feature, a substantial tree stand, a water course or similarly designed feature. Agricultural uses may be permitted in the buffer area. This program does not apply to additions and remodeling to legally existing development." Butte County has codified the requirement for agricultural buffer setbacks (Butte County Code Sections 24-286) and generally requires a structural setback distance of 300 feet from all property lines. The setback must be provided on the project property, not on adjacent properties.

The proposed structures related to the campgrounds and BSRSP headquarters facilities would be located over 300 feet away from the property boundary with neighboring private agricultural lands. The area between the campgrounds and the property boundary is proposed to include restored riparian forest, grassland buffer, as well as Mud Creek along the eastern boundary of the project site. The proposed recreational trails are not considered structures and would be at least 100 feet away from the property boundary. Therefore, the project meets the intent of Butte County's agricultural buffer setback.

Butte County has a Right to Farm Ordinance, the purpose and intent of which is to limit the circumstances under which properly conducted agricultural operations on agricultural land in Butte County may be considered a nuisance. State Parks will notify visitors and campers at BSRSP of the agricultural operations on neighboring lands and the inherent potential problems associated with being located near such operations, including, without limitation, noise, odors, fumes, dust, smoke, insects, operation of machinery during any time of day or night, storage and disposal of manure, and ground or aerial application of fertilizers, soil amendments, seeds and pesticides. As intended in the Right to Farm Ordinance, through disclosure, visitors of the Park should better

understand the impact of being near agricultural operations and be prepared to accept attendant conditions from properly conducted agricultural operations.

COMMON RESPONSE 8—SAFETY OF RECREATION FACILITIES DURING FLOOD EVENTS

COMMON COMMENT

Multiple commenters expressed concern regarding the proposed recreation facilities, specifically restrooms and the dump station, and how they will be designed and managed to protect water quality and human safety during flood events. (See Comments L1-7, L1-30 through L1-32, L1-46, L1-63, L1-78, I6-9, I7-8 and PH-20).

COMMON RESPONSE

This comment was also raised during the scoping period and responded to in Appendix A of the Draft EIR. Please refer to “Public Access and Outdoor Recreation Specifications” in Section 3.4.2 and Impact 4.3-d of the EIR. In addition, in response to comments on the Draft EIR, the RV campsites as well as the dump station have been removed from the Recreation Facilities plans (please see Appendix D of the EIR).

As described in the EIR, the habitat restoration and the recreation facilities are planned to be on the Nicolaus property and Singh Unit, which are located in the floodplain. The recreation facilities would be inundated in flood events; therefore, all proposed recreation facilities would be designed, constructed and operated to minimize any potential wastewater discharge to the river under flood flow conditions in compliance with State Water Quality Control Board requirements. The existing Nicolaus property farm complex, including the existing septic system/leach field, is above the normal flood stage. This existing septic system would be used to service the relocated BSRSP headquarters. A new septic system/leach field would be installed above the normal flood stage (such as near the Nicolaus farm complex) to service the combination restroom/shower building. These septic systems would be outside of the normal flood levels and in preparation for more extreme flood events, the check-valves at the facilities could be turned off. The other restroom facilities would be pre-manufactured vault toilets placed on raised pads. Vault toilets are impervious to water, which is why they are safe to use in floodplains and why they require pumping for maintenance. In preparation of flood events, the vault toilets would be pumped, hosed out, and sealed. By cleaning and sealing the vault toilets, these facilities do not leak wastewater during flood events.

BSRSP monitors real-time flow conditions at upstream locations to monitor for potential flood conditions at the Park. When there is indication of potentially approaching flood levels, standard BSRSP maintenance measures are enacted, including: removing equipment and vehicles from potentially affected park and service yards to higher ground; turning off utilities (electricity, water, and gas); pumping and sealing vault toilets; and cleaning and sealing restroom/shower buildings (sand bags in toilets, urinals, floor drains and door thresholds; sink drains and door jams are duct taped; water heater removed if not installed above flood threat). Additionally, after flood events, the septic tanks are pumped. As part of BSRSP, the facilities on the Singh Unit and the Nicolaus property would be subject to these maintenance measures. Furthermore, after flood events, State Parks would remove flood debris from grasslands and flow through areas.

It should be noted that there are many public recreation facilities that are located in flood-prone areas and in fact, such uses are recommended for floodplains and flood prone areas. The American River Parkway in Sacramento County is one example of another multi-use park within a floodplain, which provides habitat, recreational facilities, and flood protection. There are facilities, including vault toilets, within the American River Parkway that are maintained in compliance with State Water Quality Control Board requirements, even in times of flooding. According to Steve Flannery, Chief Ranger for the American River Parkway, the Parkway’s vault toilets are pumped out, hosed down and sealed in preparation for flood events; this procedure prevents wastewater leakage from these facilities during flood events (Flannery, pers. comm., 2008). The facilities proposed on the Nicolaus property and Singh Unit are not experimental or unproven – they are facilities that are used in similar

parks and that can be properly maintained to protect water quality and public safety during flood events. Furthermore, the current project planning involves conceptual designs and environmental review; State Parks will consider the best facilities, technologies and processes for the project facilities at the time of project implementation.

Reichenberg, Denise

From: Matthew Friedman [matthew_friedman@dot.ca.gov]
Sent: Thursday, February 07, 2008 6:04 AM
To: Reichenberg, Denise
Cc: scott.morgan@opr.ca.gov
Subject: DEIR (SCH 2007082160) Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Facilities Development Plan

Dear Ms. Reichenberg,

Thank you for the opportunity to review the Draft Environmental Impact Report (DEIR) (SCH 2007082160) for the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Facilities Development Plan.

Implementation of the proposed plan would aid in the recovery of special-status species, increase public access to State Park facilities and increase recreational opportunities.

Based upon minimal impacts to the State Highway System, we have no comments.

Matt Friedman, Transportation Planner
Caltrans District 3
703 B St.
Marysville, CA 95901
(530) 741-4004

S1-1

**Letter
S1
Response**

**State of California Department of Transportation, District 3
Matt Friedman, Transportation Planner
Received February 7, 2008**

S1-1

Thank you for your comment. It is acknowledged that Caltrans finds value in the project due to recovery of special-status species, an increase in public access to State Park facilities and increase in recreational facilities and that Caltrans has no comments on the Draft EIR, based on the minimal impacts to the State Highway system.

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 942360001
(916) 653-5791



March 7, 2008

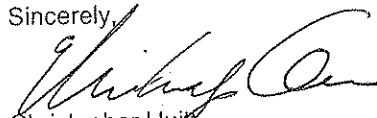
Denise Reichenberg, Sector Superintendent
California Department of Parks and Recreation
525 Esplanade
Chico, California 95926

Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation
Facilities Development Project
State Clearinghouse (SCH) Number: 2007082160

The project corresponding to the subject SCH identification number has come to our attention. The limited project description suggests your project may be an encroachment on the State Adopted Plan of Flood Control. You may refer to the California Code of Regulations, Title 23 and Designated Floodway maps at <http://recbd.ca.gov>. Please be advised that your county office also has copies of the Board's designated floodways for your review. If indeed your project encroaches on an adopted food control plan, you will need to obtain an encroachment permit from the Central Valley Flood Protection Board prior to initiating any activities. The attached Fact Sheet explains the permitting process. Please note that the permitting process may take as much as 45 to 60 days to process. Also note that a condition of the permit requires the securing all of the appropriate additional permits before initiating work. This information is provided so that you may plan accordingly.

If after careful evaluation, it is your assessment that your project is not within the authority of the Central Valley Flood Protection Board, you may disregard this notice. For further information, please contact me at (916) 574-1249.

Sincerely,


for Christopher Hujik
Staff Environmental Scientist
Floodway Protection Section

Enclosure

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

S2-1

Encroachment Permits Fact Sheet

Basis for Authority

State law (Water Code Sections 8534, 8608, 8609, and 8710 – 8723) tasks The Central Valley Flood Protection Board ("The Board") with enforcing appropriate standards for the construction, maintenance, and protection of adopted flood control plans. Regulations implementing these directives are found in California Code of Regulations (CCR) Title 23, Division 1.

Area of The Central Valley Flood Protection Board Jurisdiction

The adopted plan of flood control under the jurisdiction and authority of The Board includes the Sacramento and San Joaquin Rivers and their tributaries and distributaries and the designated floodways.

Streams regulated by The Board can be found in Title 23 Section 112.

Information on designated floodways can be found on The Board's website at <http://www.recbd.ca.gov/maps/index.cfm> and CCR Title 23 Sections 101 - 107.

Regulatory Process

The Central Valley Flood Protection Board ensures the integrity of the flood control system through a permit process (Water Code Section 8710). A permit must be obtained prior to initiating any activity, including excavation and construction, removal or planting of landscaping within floodways, levees, and 10 feet landward of the landside levee toes. Additionally, activities located outside of the adopted plan of flood control but which may foreseeable interfere with the functioning or operation of the plan of flood control is also subject to a permit of The Board.

Details regarding the permitting process and the regulations can be found on The Board's website at <http://recbd.ca.gov/> under "Frequently Asked Questions" and "Regulations," respectively. The application form and the accompanying environmental questionnaire can be found on The Board's website at <http://www.recbd.ca.gov/forms/index.cfm>.

Application Review Process

Applications when deemed complete will undergo technical and environmental review by The Board and/or Department of Water Resources staff.

Technical Review

A technical review is conducted of the application to ensure consistency with the regulatory standards designed to ensure the function and structural integrity of the adopted plan of flood control for the protection of public welfare and safety. Standards and permitted uses of designated floodways are found in CCR Title 23 Sections 107 and Article 8 (Sections 111 to 137). The permit contains 12 standard conditions and additional special conditions may be placed on the permit as the situation warrants. Special conditions, for example, may include mitigation for the hydraulic impacts of the project by reducing or eliminating the additional flood risk to third parties that may be caused by the project.

Additional information may be requested in support of the technical review of your application pursuant to CCR Title 23 Section 8(b)(4). This information may include but not limited to geotechnical exploration, soil testing, hydraulic or sediment transport studies, and other analyses may be required at any time prior to a determination on the application.

Environmental Review

A determination on an encroachment application is a discretionary action by The Board and its staff and subject to the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.). Additional environmental considerations are placed on the issuance of the encroachment permit by Water Code Section 8608 and the corresponding implementing regulations (California Code of Regulations – CCR Title 23 Sections 10 and 16).

In most cases, The Board will be assuming the role of a "responsible agency" within the meaning of CEQA. In these situations, the application must include a certified CEQA document by the "lead agency" [CCR Title 23 Section 8(b)(2)]. We emphasize that such a document must include within its project description and environmental assessment of the activities for which are being considered under the permit.

Encroachment applications will also undergo a review by an interagency Environmental Review Committee (ERC) pursuant to CCR Title 23 Section 10. Review of your application will be facilitated by providing as much additional environmental information as pertinent and available to the applicant at the time of submission of the encroachment application.

These additional documentations may include the following documentation:

- California Department of Fish and Game Streambed Alteration Notification (<http://www.dfg.ca.gov/1600/>),
- Clean Water Act Section 404 applications, and Rivers and Harbors Section 10 application (US Army Corp of Engineers),
- Clean Water Act Section 401 Water Quality Certification, and
- Corresponding determinations by the respective regulatory agencies to the aforementioned applications, including Biological Opinions, if available at the time of submission of your application.

The submission of this information, if pertinent to your application, will expedite review and prevent overlapping requirements. This information should be made available as a supplement to your application as it becomes available. Transmittal information should reference the application number provided by The Board.

In some limited situations, such as for minor projects, there may be no other agency with approval authority over the project, other than the encroachment permit by The Board. In these limited instances, The Board may choose to serve as the "lead agency" within the meaning of CEQA and in most cases the projects are of such a nature that a categorical or statutory exemption will apply. The Board cannot invest staff resources to prepare complex environmental documentation.

Additional information may be requested in support of the environmental review of your application pursuant to CCR Title 23 Section 8(b)(4). This information may include biological surveys or other environmental surveys and may be required at anytime prior to a determination on the application.

S2-1

Based on consultation with the Central Valley Flood Protection Board (CVFPB), the project site is located outside of CVFPB's jurisdiction. The CVFPB's jurisdiction in the vicinity of the project site ends at River Road, which is the westerly boundary of the project. However, the project site is located within Butte County's jurisdiction (roughly equivalent to the 100-year floodplain). A Memorandum of Agreement Concerning Flood Plain Management (MOA) between Butte County and the State Reclamation Board (now called CVFPB), was entered into in 1995 and amended in 1999. Paragraph #8 of the MOA specifically pertains to State and federal proposed activities in Zone II (Butte County's jurisdiction; roughly equivalent to the 100-year floodplain). Pursuant to paragraph #8 of the MOA, the County may decide not to regulate an activity, but can notify the CVFPB at which time the CVFPB may exercise their right to require an encroachment permit application.

There is a Sacramento River Reclamation District (SRRD) that was formed in Butte County. Although SRRD claims jurisdiction over the activities of the State in the proposed project, State Parks believes that this District does not have any regulatory control. Section 3.D of the MOA Amendments (November 13, 1999) states, "Formation of the Sacramento River Reclamation District is acknowledged, but the County shall not designate its regulatory responsibility to the District without approval of The Reclamation Board, which is not being given at this time. However, the County may allow the District to have an advisory role to the County in exercising its regulatory authority. See MOA Text, Paragraph 15."

State Parks shall coordinate with CVFPB and Butte County and submit an application for a floodway encroachment permit to the appropriate agency.



ARNOLD SCHWARZENEGGER
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT
DIRECTOR

March 18, 2008

Denise Reichenberg
California Department of Parks and Recreation
525 Esplanade
Chico, CA 95926

Subject: Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities
Development Project
SCH#: 2007082160

Dear Denise Reichenberg:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on March 17, 2008, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

S3-1

S3-2

**Document Details Report
State Clearinghouse Data Base**

SCH# 2007082160
Project Title Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities
Lead Agency Development Project
Parks and Recreation, Department of

Type EIR Draft EIR
Description Proposal to implement the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project on two parcels known as the Singh Unit and Nicolaus property along the Sacramento River. The Nicolaus property is currently owned by State Parks and located within BSRSP. The Nicolaus property is currently owned by TNC, but would be transferred to State Parks, as part of the proposed project, prior to implementation of habitat restoration activities and recreation facilities development.

Lead Agency Contact

Name Denise Reichenberg
Agency California Department of Parks and Recreation
Phone (530) 895-4304 **Fax**
email
Address 525 Esplanade
City Chico **State** CA **Zip** 95926

Project Location

County Butte
City Chico
Region
Cross Streets River Road and Sacramento Avenue
Parcel No. USGS Ord Ferry, CA USGS 7.5 min
Township 22N **Range** 1W **Section** **Base**

Proximity to:

Highways near 32 and 45
Airports
Railways SPRR
Waterways Sacramento River, Big Chico Creek, Mud Creek
Schools Chico Unified School District
Land Use The project site is currently in agricultural production.
General Plan: OFC - orchard and field crops, 5-40 acres
Zoning: A-160, agriculture with a minimum parcel size of 160 acres

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Other Issues; Recreation/Parks; Vegetation; Water Quality; Wetland/Riparian

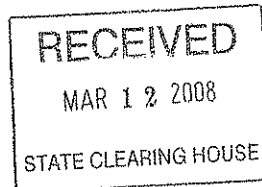
Reviewing Agencies Resources Agency; Regional Water Quality Control Bd., Region 5 (Redding); Department of Parks and Recreation; Native American Heritage Commission; Public Utilities Commission; Office of Historic Preservation; Department of Health Services; Cal Fire; Department of Fish and Game, Region 2; Department of Water Resources; Department of Conservation; California Highway Patrol; Caltrans, District 3; Central Valley Flood Protection Board

Date Received 01/31/2008 **Start of Review** 01/31/2008 **End of Review** 03/17/2008

Note: Blanks in data fields result from insufficient information provided by lead agency.

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 942360001
(916) 653-5791



Clear
3-17-08
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March 7, 2008

Denise Reichenberg, Sector Superintendent
California Department of Parks and Recreation
525 Esplanade
Chico, California 95926

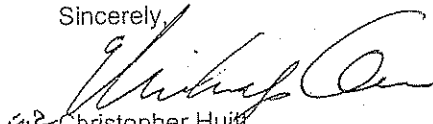
Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation
Facilities Development Project
State Clearinghouse (SCH) Number: 2007082160

The project corresponding to the subject SCH identification number has come to our attention. The limited project description suggests your project may be an encroachment on the State Adopted Plan of Flood Control. You may refer to the California Code of Regulations, Title 23 and Designated Floodway maps at <http://recbd.ca.gov>. Please be advised that your county office also has copies of the Board's designated floodways for your review. If indeed your project encroaches on an adopted food control plan, you will need to obtain an encroachment permit from the Central Valley Flood Protection Board prior to initiating any activities. The attached Fact Sheet explains the permitting process. Please note that the permitting process may take as much as 45 to 60 days to process. Also note that a condition of the permit requires the securing all of the appropriate additional permits before initiating work. This information is provided so that you may plan accordingly.

S3-3

If after careful evaluation, it is your assessment that your project is not within the authority of the Central Valley Flood Protection Board, you may disregard this notice. For further information, please contact me at (916) 574-1249.

Sincerely,


for Christopher Hult
Staff Environmental Scientist
Floodway Protection Section

Enclosure

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

**Letter
S3
Response**

**California Governor's Office of Planning and Research
State Clearinghouse and Planning Unit
Terry Roberts, Director, State Clearinghouse
Received March 18, 2008**

- S3-1 It is acknowledged that the State Clearinghouse submitted the Draft EIR to selected agencies for review. State Parks has received, and is responding to comments, from State agencies as documented in this Final EIR.
- S3-2 It is acknowledged that State Parks has complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to CEQA.
- S3-3 Please refer to response to Comment S2-1.

RECEIVED 3/11/08



BOARD OF SUPERVISORS

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25 COUNTY CENTER DRIVE - OROVILLE, CALIFORNIA 95965
TELEPHONE: (530) 538-7631

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Fifth District

March 11, 2008

Denise Reichenberg
Sector Superintendent
California Department of Parks and Recreation
Northern Buttes District/Valley Sector
525 Esplanade
Chico, California 95926

Re: **California Department of Parks and Recreation, Draft Environmental Impact Report, Bidwell-Sacramento River State Park, Habitat Restoration and Outdoor Recreation Facilities Development Project, Butte County, California (SCH No. 2007082160)**

Dear Ms. Reichenberg:

The Butte County Board of Supervisors is writing to you to state its strong objection to the proposed Bidwell-Sacramento River State Park project and to notify the State that sufficient notice was not received by the Butte County Board of Supervisors, the representative for all environmental and project notices for the County. In fact, no notice was received by the Board of Supervisors; the project and the Draft EIR were brought to the Board's and staffs' attention inadvertently through the noticing by staff from the Sacramento River Conservation Area Forum. The failure to consult with and provide adequate notice to the County for comments is a violation of Public Resources Code Sections 21104, 21153 and CEQA Guideline Section 15086.

L1-1

L1-2

Butte County finds the proposed project to be completely inappropriate for the proposed location and incompatible with surrounding agricultural properties. The County is extremely concerned with several aspects of the proposed project and contends that the process, procedures, and erroneous factual data used for a baseline with respect to the Draft EIR submitted by the California State Parks Department does not meet the requirements of the California Environmental Quality Act (CEQA). The County's concerns include, but are not limited to, a complete disregard for local land use policies, development in a flood plain, inundation of sewage disposal systems in flood events, compatibility with agricultural operations, additional requests for assistance/response from Sheriff and Fire personnel and control of long term camping. The County provides the following comments and concerns with respect to the Draft EIR for the above referenced project, despite the limited time staff had for review:

L1-3

L1-4

L1-5 to
L1-10

L1-11

DEPARTMENT OF DEVELOPMENT SERVICES COMMENTS:

The analysis of the regulatory setting in numerous sections of the Draft EIR fails to mention or consider applicable goals, policies and programs of the adopted Butte County General Plan. Specifically, the Draft EIR fails to consider the following:

- | | |
|--|--------------|
| <p>A. Noise – Discussion on noise, one of the effects found not to be significant and eliminated from further analysis in the Draft EIR, includes reference to a Butte County General Plan Standard but fails to disclose or analyze the effect against adopted policies. Butte County Noise Element Policy 5 states “[c]ontrol recreation activities that have the potential to cause objectionable noise.” The Sheriff’s Department has commented (see below) that similar recreational facilities have resulted in noise complaints and demand for law enforcement services.</p> | <p>L1-12</p> |
| <p>B. Safety – The following findings, policies and implementations from the Safety Element of the Butte County General Plan must be considered in assessing and mitigating potential impacts, including:</p> <ul style="list-style-type: none">▪ 2.1 Policy – Encourage adequate fire protection services in all areas of population growth and high recreation use.▪ 2.1 Implementation – Identify present and future limits of adequate fire protection services. Guide development to those areas through zoning and development review processes.▪ Finding 4 – Fire protection facilities are marginal in some areas of the County. | <p>L1-13</p> |
| <p>C. Agricultural Resources - Section 4.1, Agriculture, of the Draft EIR, in its analysis of the regulatory setting acknowledges just one policy of the many goals, policies, and programs contained in the Agricultural Element of the Butte County General Plan. An understanding of Butte County’s regulatory setting, as expressed through the General Plan and Butte County Code, are key to determining the significance of the impacts of the proposed project on conversion of agricultural lands. The Butte County Agricultural Commissioner has submitted comments on the impacts of the proposed project on agriculture and the loss of prime agricultural lands (see below). The Commissioner’s comments, together with an understanding of the regulatory setting, make it clear that the proposed project will result in the significant and unavoidable impact of conversion of prime agricultural lands to non-agricultural uses.</p> | <p>L1-14</p> |
| | <p>L1-15</p> |
| | <p>L1-16</p> |
| <p>Relevant goals, policies and programs from the Agricultural Element of the Butte County General Plan include the following:</p> | |
| <ul style="list-style-type: none">• Program 2.3 – “Where development approval, other than residential, is proposed on lot(s) adjacent to an agricultural operation or Orchard and Field Crops land use category, the Zoning Ordinance shall require a natural or man-made buffer between the development and agricultural land use. The buffer shall be totally on the lot(s) where development is proposed. A buffer could be a topographic feature, a substantial tree stand, a water course or similarly defined feature. Agricultural uses may be permitted in the buffer area. This program does not apply to additions and remodeling to legally existing development.” Butte County has codified the requirement for agricultural buffer setbacks (Butte County Code §24-286) and generally requires a structural setback distance of 300 feet from all property lines. The setback must be provided on the project property, not on adjacent properties. | <p>L1-17</p> |
| <ul style="list-style-type: none">• Program 2.8 – “New residences and/or conversion of agricultural land to non-agricultural land shall only occur when full mitigation of impacts to the extent under law are provided | <p>L1-18</p> |

including, but not limited to, roads, drainage, schools, fire protection, law enforcement, recreation, sewage, and lighting.”

L1-18
Cont'd

- Program 2.9 – “Continue to support the Chico Greenline policies.” These policies provide “[i]t shall be the policy of Butte County to conserve and protect for Agricultural Use the lands of the Chico Area that are situated on the Agricultural Side of the Chico Area Greenline.” (Butte County General Plan Land Use Element LUE-83).
- Goal 3 – “Support the management of agricultural lands in an efficient, economical manner, with minimal conflict from non-agricultural uses.”
 - Policy 3.1 – “Apply the County’s *Right to Farm* Ordinance to all non-agricultural land use approvals, including building permits, within or adjacent to designated agricultural areas.” The Ordinance declares it is the policy of the County “to conserve, protect, enhance, and encourage agricultural operations on agricultural land within the unincorporated area of the County” and limits the ability to consider agricultural uses as nuisances.

L1-19

L1-20

D. Conversion of Agricultural Lands

- **Draft EIR 4.2.4 IMPACT ANALYSIS** (page 4.2-4)
4.2-a Change of Land Use from Agricultural Land to Restored Native Riparian Habitat and Developed Recreational Facilities. The proposed project would restore agricultural acreage to native riparian habitat and develop outdoor recreation facilities, effectively removing the land from agricultural production. However, the proposed project would neither be 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.

Comment:

The above analysis suggests that the permanent infrastructure of several miles of paved roads, paved walkways, drainage facilities, water and sewage facilities, bathrooms, offices, maintenance buildings, paved parking lots, an amphitheatre, etc. as described in detail in Appendix D Recreational Facilities, including RV Campground, Vehicle Campground, Walk-in Tent Campground, State Park Headquarters are somehow impermanent.

L1-21

Following this rationale, if a developer were to pave over 70 acres of Prime Farmland, this would not constitute a loss of farmland because the paving “could” be torn up. The State is suggesting that the extensive facilities proposed on this site will be torn up. If that is the case, the project description must include a full reclamation plan, including funding mechanism to achieve the goal of eventually returning this land to its current Prime Agricultural state. Lacking such a plan, the County contends that the land would be irreversibly lost to as a prime agricultural land resource.

- **Page 4.2-6 of the Draft EIR states:**
“Similarly, the term “urban and built up land” is also used in the California DOC’s FMMP. The proposed habitat restoration and outdoor recreation facilities do not fit this definition of

urban and built-up land. Therefore, the planned uses do not qualify as "conversion" to development."

Comment:

This statement makes an erroneous leap in logic, reasoning that if the physical changes resulting from this project that irreversibly remove lands from agricultural production are not strictly "urban" in nature, no conversion has taken place. This same logic would lead the State to conclude that it would be possible to engage in normal farming operations on the land thus converted by this project to RV Campground, Vehicle Campground, Walk-in Tent Campground, and State Park Headquarters. The Draft EIR incorrectly concludes that the development of extensive infrastructure to allow the proposed project would not have an adverse physical impact in conversion of agricultural lands as the project does not comprise urban and built-up land."

L1-22

• **Draft EIR Page 4.2-4**

As the EIR accurately cites from Appendix G of the State CEQA Guidelines, a lead agency should determine that a project would cause potentially significant environmental impacts. As cited from the "Agriculture Resources" section of the Appendix G, a lead agency should determine that significant environmental impacts to agricultural resources will result from a project when the project would:

1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Important Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
3. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Important Farmland, to non-agricultural use.

Comment:

This project would convert at least 163 acres designated Prime Farmland from high producing agriculture to a non-agricultural, recreational use.

L1-23

The proposed non-agricultural, recreational use is in conflict with existing Butte County Agricultural 40-acre minimum zoning designation. Under that local jurisdiction zoning designation, the proposed non-agricultural, recreational uses are not allowed.

This project would result in irreversible changes to the environment on this site that would attract numerous sensitive human receptor tourists and recreational users to the general area, which is exclusively used for intensive agricultural production. Normal and customary agricultural practices employ chemical products that are highly toxic to human sensitive receptors. The imposition of these sensitive human receptors into a zone of intensive agricultural production will result in regulatory restrictions on the normal and customary agricultural practices that can be used in commercial agricultural production. This is likely to result in agricultural operations in the lands adjacent to the project becoming economically unviable for agricultural production. It is reasonable to conclude that this will likely result in the cessation of agricultural operations. It is reasonable to conclude that, once farming

L1-24

operations are no longer economically viable, pressures on land to convert to urban and industrial/commercial uses increases, resulting in the eventual loss of Prime Farmland.

L1-24
Cont'd

• **Page 4.2-7 of the Draft EIR states:**

“Indirect Conversion of Agricultural Land. As described above, the proposed habitat restoration and recreational facilities are non-urban uses that would be protective of and compatible with adjacent agricultural land. Additionally, the project would not include the extension of utility lines or new utility connections, which would potentially open new development pressures.

However, during the scoping process for this project, neighboring private agricultural landowners expressed concerns regarding indirect effects of the project on their land. The project has considered and incorporated measures to avoid indirect impacts to neighboring agricultural lands as follows.”

Comment:

This section of the EIR inaccurately characterizes the proposed development as “non-urban” in nature and impacts. The physical changes resulting from this project are similar in nature and resulting impacts to “urban” uses. This project would impose the urban-like structures necessary for an RV Campground, Vehicle Campground, Walk-in Tent Campground, and State Park Headquarters on an area which currently has none of these impacts. The EIR has inaccurately concluded that this extensive development of urban-like infrastructure to allow this new use would not have significant and irreversible impacts on the site and surrounding agricultural uses.

L1-25

As discussed above, this project would result in irreversible changes to the environment on this site that would attract numerous sensitive human receptor tourists and recreational users to the general area, which is exclusively used for intensive agricultural production. Normal and customary agricultural practices employ chemical products that are highly toxic to human sensitive receptors. The imposition of these sensitive human receptors into a zone of intensive agricultural production will result in regulatory restrictions on the normal and customary agricultural practices that can be used in commercial agricultural production. This is likely to result in agricultural operations in the lands adjacent to the project becoming economically unviable for agricultural production. It is reasonable to conclude that this will likely result in the cessation of agricultural operations. It is reasonable to conclude that, once farming operations are no longer economically viable, pressures on land to convert to urban and industrial/commercial uses increases, resulting in the eventual loss of Prime Farmland.

L1-26

The EIR inaccurately states that: “The project has considered and incorporated measures to avoid indirect impacts to neighboring agricultural lands as follows.” No mitigation measures of any kind are provided the Section 4.2 of the EIR. The EIR does not identify any mitigation measures to address the loss of prime agricultural land and to mitigate impacts to surrounding agricultural land, which the County has detailed above.

L1-27

E. Impact to Lands under Williamson Act Contract

- Draft EIR Page 4.2-10:

Land Use Compatibility with Agriculture and Williamson Act Contracts. The proposed habitat restoration and outdoor recreational uses at the project site would be compatible with surrounding agriculture land uses, based on existing federal and state laws and programs for farmland protection. As described in Impact 4.2-a, the Federal FPPA indicates that non-agricultural uses are urban uses, which detract from agricultural land values in the rating system, while “non-urban uses,” which create or protect agricultural land values, include non-paved parks and recreational areas. Based on the characteristics of the proposed habitat restoration and outdoor recreation facilities, the project would qualify as non-urban uses, which the FPPA considers to be protective of and compatible with agricultural values. The Williamson Act also contains numerous provisions that recognize the compatibility between agricultural and recreation/open space uses. The definitions included in the statute are the first indication of such compatibility. It defines an “agricultural preserve” as an area devoted to agricultural use, recreational use, open space use, or any combination thereof (California Government Code Section 51201(d)). Also, “recreational use” is defined as the use of the land in its agricultural or natural state by the public, with or without charge, for a range of listed uses, including, but not limited to walking, hiking, picnicking, camping, swimming, boating, fishing, and other outdoor sports (California Government Code Section 51201(n)). Finally, “compatible use” is defined as any use determined to be compatible with the agricultural, recreational, or open space use of the land within the preserve (California Government Code Section 51201(e)). The habitat restoration and recreational facilities proposed are considered compatible with agriculture and therefore should have no significant adverse effects on neighboring farmland production. Furthermore, per the goals and guidelines under Park Plan Overall Goal AO-4, State Parks has incorporated design features (e.g., grassland buffers) into the habitat restoration and recreation facility plans to minimize land use incompatibilities and has/will coordinate with public and private landowners in the project vicinity to minimize land use conflicts. Park Plan guidelines also address fire protection and law enforcement at the Park (see Chapter 3, “Description of the Proposed Project”) to minimize incompatibilities with active agricultural operations on adjacent properties.

The definitions described above are reinforced in Section 52105 of the Williamson Act, which states that land devoted to recreational use...may be included within an agricultural preserve (California Government Code Section 51205). In outlining the purpose of the Williamson Act, the statute states that the discouragement of premature and unnecessary conversion of agricultural land to urban uses is a matter of public interest (California Government Code Section 51220(c)); there is no reference to other non-urban uses, such as low-intensity rural outdoor recreation, such as those that result from the proposed project. The clearest evidence for compatibility between agriculture and the habitat restoration and recreational facilities proposed at the project site are found in the principles of compatibility presented in Section 51238.1 of the statute. It states that uses approved on contracted lands, such as those proposed for the project site, will not significantly compromise the long-term agricultural capability of the subject contracted parcel in agricultural preserves (California Government Code Section 51238.1(a)(1)). The proposed project, and goals and guidelines of the Park Plan, strive to maintain physical conditions of the land that create resource values, including future agricultural and open space capabilities. Therefore, the habitat restoration and recreational facilities proposed are considered compatible with surrounding agriculture land

use this impact is considered less than significant.

Comment:

The EIR has inaccurately assessed the nature of the proposed development as being “non-urban” in nature. As previously discussed, this project clearly does not “create or protect agricultural land values”. To the contrary, this project results in the complete elimination of agriculture on the site and negative impacts on the ability of surrounding agricultural producers to engage in farming. As previously discussed, it is reasonable to conclude that, once farming operations are no longer economically viable, pressures on land to convert to urban and industrial/commercial uses increases, resulting in the eventual loss of Prime Farmland.

L1-28

The EIR inaccurately describes the Williamson Act, its regulatory structure, its implementation, and the impacts that this project will have on land subject to Williamson Act contract. The Williamson Act program is a locally administered program, subject to State regulations. The Williamson Act contract on the subject land is between the County of Butte and the current landowner. The operative regulations regarding Williamson Act contracts in Butte County is the January 23, 2007 Resolution 07- 021 of the Board of Supervisors of the County of Butte, Exhibit A (copy here attached). The proposed project has not complied with the regulatory setting detailed in those rules and procedures that provide for Butte County’s discretionary consideration of the conversion of Williamson Act-contract land to an alternate use. Neither the State of California nor the landowner has consulted with the Butte County Williamson Act Advisory Committee regarding this project, nor does the project or Draft EIR reference or address the local regulations of Butte County which govern the implementation of the Williamson Act in Butte County. Butte County’s local regulations (Butte County Resolution 07- 021, Exhibit) are fully consistent with State Williamson Act enabling statutes. While Section California Government Code Section 52105 of the Williamson Act does allow the local jurisdiction to determine if a recreational use may be included within an agricultural preserve, no such action has been requested by the landowner.

L1-29

PUBLIC WORKS COMMENTS:

In conformance with Federal Emergency Management Agency criteria, Butte County has adopted specific requirements for development within a designated flood plain (Article IV of Chapter 26 of the Butte County Code). These Code requirements were enacted to protect the public health and safety as well as any new structures. The requirements include flood proofing or elevating the lowest floor of structures above the base flood elevation (BFE) and protection of water and sewage disposal systems.

L1-30

A. The Draft EIR (Appendix D) indicates that structures will be elevated approximately 1 foot above grade to provide for improved flood protection, while the Hydrologic analysis (Appendix B) indicates the flood depth between 2’ and 10’. There is no indication that the proposed structures (showers; bathrooms; Headquarters; entry plaza; and RV electrical, water and sewer hookups) and their contents will be protected from flooding.

L1-31

B. There is insufficient information to determine if the sewerage disposal systems will be appropriately placed outside the 10-year flood plain or properly engineered to prevent infiltration of floodwaters into the systems or prevent contamination of the floodwaters from the systems. A sample concern being the design of a shower system that will not allow infiltration or contamination when it is under 1’ to 9’ of floodwaters.

L1-32

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| <p>C. The Flood Neutral Hydraulic Analysis contained in Appendix B, makes the following assumptions: The project is located on the Sacramento River between River Mile (RM) 193.5 (near Big Chico Creek) and RM 195 (near West Sacramento Avenue; Hydraulic Analysis Section 3.4 indicates the simulated flows used are 170,000 cfs for the Sacramento River and 15,000 cfs from Stony Creek (enters the Sacramento River near RM 190 downstream of the project); the two river gages in this area are Hamilton City near RM 199.5 and Ord Ferry near RM 184. These assumptions do not appear to accurately model the project.</p> <ul style="list-style-type: none"> ▪ The analysis notes that the project will remove berms from the west side of the Sycamore Mud Creek facility but fails to address the over 20,000 cfs in flows coming in below the Hamilton City gage and impacting the project from Pine Creek, Rock Creek, Sycamore Mud Creek, Lindo Channel and Big Chico Creek. ▪ The analysis assumes flood waters will flow through the project and does not address the backwater effects when the Sacramento River is high and the flows from Pine Creek, Rock Creek, Sycamore Mud Creek, Lindo Channel and Big Chico Creek need to develop head in order to flow into the River. The flood plain shown in their analysis does not conform to the FEMA flood plain or actual flooding in the area since it magically stops at the east (left) bank of Sycamore Mud Creek instead of flooding a large area north of Big Chico Creek and east of Sycamore Mud Creek. This area is subject to frequent flooding. ▪ The analysis indicates an almost constant water depth in the before and after conditions, but fails to note that most of the campground area, including all the roads, is being elevated a minimum of 1' to protect from flooding. Since they do not show water surface elevations in their report, either the water depth is consistent and the water surface is 1' higher or the water surface is consistent and they are showing 1' too much depth. <p>D. The project plan contained in Appendix D indicates both sites will have trails for bicycle and pedestrian use but these sites are separated by two privately owned properties currently in agricultural uses. There is no trail connecting the sites forcing the public out onto a very narrow River Road, which has no paved shoulders or bike lanes. At a minimum the Project should construct a path or trail separate from the County maintained River Road to provide for public safety.</p> <p>E. The County road that provides access to the proposed project area, River Road, is a very narrow, winding County roadway that may not be able to accommodate the large recreational vehicles that would be attracted to the proposed project.</p> | <p>L1-33</p> <p>L1-34</p> <p>L1-35</p> <p>L1-36</p> <p>L1-37</p> <p>L1-38</p> |
|--|---|

AGRICULTURE COMMISSIONER COMMENTS:

The Project proposes to convert prime agricultural land to non-agricultural use. Existing farming practices on the site will cease, orchards will be removed, substantial non-agricultural infrastructure will be put in place, and the site will be developed to facilitate the permanent occupation of the land by the general public for recreational use. Specific concerns are as follows:

- | | |
|--|---------------------------|
| <p>A. There are commercial agricultural operations, under pesticide permit, on three boundaries of the project site. Impacts and mitigation measures concerning these operations are not adequately addressed in the Draft EIR.</p> <p>B. In Section 4.2 – Agricultural Resources (4.2.1 and 4.2.2), the Draft EIR relies on a number of procedural and regulatory technicalities found in Federal and State farmland protection policies to</p> | <p>L1-39</p> <p>L1-40</p> |
|--|---------------------------|

justify conversion and development of this prime agricultural land. There are no clearly stated conclusions, but there are many equivocations and implied, vaguely conclusive, statements. A detailed examination of the language in this section is necessary and could not be done in the short timeframe given the Agricultural Commissioner's Office for review.

L1-40
Cont'd

- C. The Draft EIR acknowledges the site to be prime agricultural land but defaults to a variety of questionable land use definitions and terminology in an attempt to persuade reviewers that the project is not actually converting productive prime agricultural land to non-agricultural use.
- D. Overall, the Draft EIR demonstrates a lack of acknowledgement regarding the impacts that the proposed change in land use will impose on the surrounding agricultural properties and the possible health and safety risks the users of the proposed facility will be exposed to. The project proposes to convert 163 acres of prime agricultural land to non-agricultural use. The land in question is squarely positioned in the County General Plan and designated and zoned as commercial agriculture. The Draft EIR fails to propose any mitigation measures in the Agricultural Resources Section. In short, the impacts to agricultural resources are understated and not adequately addressed.
- E. The conclusions in the Impact Analysis (Section 4.2.4) appear to be flawed. The conclusions are heavily biased to the benefit of the proposed project and a detailed examination of these statements is necessary.
- F. The proposed project ignores Butte County's Right to Farm Ordinance (Butte County Code §35-2(b)) as described above.

L1-41

L1-42

L1-43

L1-44

According to *Laurel Heights Improvement Assn. V. Regents of University of California (1988)*, "An EIR is intended to alert the public and its responsible officials to environmental changes caused by an environment altering project; additionally it is also intended to demonstrate to an apprehensive citizenry that the agency has in fact analyzed the implications of its actions..." Based upon the above observations, the Agricultural Commissioner finds the Draft EIR to be grossly inadequate and finds that it fails to meet the fundamental legislative intent embodied by CEQA.

L1-45

PUBLIC HEALTH COMMENTS:

- A. **Sewage:** Sewage disposal for the outdoor recreation facility is proposed to be provided by vault privies and a new septic system with leach field. Both the vault privies and septic system are located within a flood zone.

The flood frequency anticipated in the recreation area is once every 2 to 4 years, with a depth of water during flood events anticipated being between 2 and 8 feet, and with a flow velocity of 1 to 1.5 feet/second. Therefore, it is anticipated that the vault privies and septic system will be threatened with inundation by floodwater at regular intervals of roughly every 2 to 4 years.

L1-46

Sewage should be disposed of in a manner that prevents its discharge from entering waters of the State of California. The proposal lacks detail regarding the design of the RV hookups, the RV dump station, and the proposed septic system. In addition, the proposal includes no analysis of the adequacy of the existing farm septic system that is proposed to be used by the office. These design details are especially important due to the environmental sensitivity of the project site.

Vault privies have significant potential to threaten public health and water quality during flood events. Locating vault privies and discharging wastewater systems in areas prone to regular flooding is not appropriate. Although design considerations such as bulkheading and elevating the facilities so as to remain above the floodplain can partially mitigate concerns about groundwater inundation, the height and velocity of floodwater projected for this project make such mitigations impractical.

L1-46
Cont'd

Likewise, best management practices dictate that discharging wastewater systems should not be located within areas prone to flooding. Although Butte County Code §26-26 requires all sewage disposal systems within a 10-year flood plain to be designed by an engineer, even engineered systems can be damaged by floodwaters and result in discharge of untreated or under-treated wastewater directly to surface and groundwaters.

- B. Potable Water:** The proposal states the intent to utilize two existing agricultural wells as the potable water source for the recreation area. The State Division of Drinking Water, Environmental Management, will regulate the water source for this project, which will serve the public. The construction standards for potable water wells to serve the public are such that it is likely that the existing agricultural wells will not be satisfactory for this purpose.

L1-47

- C. Hazardous Materials:** The proposed project includes storage of hazardous materials at the new Park headquarters on the Nicolaus property in a location subject to routine flooding. This may result in release of hazardous materials to surface water in a flood event, an impact which may exceed the threshold of significance discussed in Appendix G of State CEQA Guidelines.

L1-48

The project will require submittal of a Hazardous Materials Release Response Plan to Butte County Environmental Health if it involves storage or handling of hazardous materials in quantities:

- (1) Equal to, or greater than, a total weight of 500 pounds or a total volume of 55 gallons.
- (2) Equal to, or greater than, 200 cubic feet at standard temperature and pressure, if the substance is compressed gas.

SHERIFF'S COMMENTS:

The Sheriff has concerns regarding the Draft EIR and the proposed project. On page 3-23, "Law Enforcement," the Draft EIR indicates "Law enforcement services are provided concurrently by State Parks and local law enforcement agencies, namely the Butte County Sheriff's Office for the portion of the BSRSP in Butte County. Park security is the primary responsibility of the Park Ranger serving the Park." The Sheriff has extreme concerns for public safety at the proposed project due to the growing budget challenges at the State-level and the fact that the State has been unable to provide adequate law enforcement resources at other State projects that lie within Butte County.

L1-49

- A.** Based upon the County's experience with other recreational areas, such as the Department of Water Resources' Lake Oroville Project and PG&E's DeSabra-Centerville Project, it is predicted that this project will result in increased law enforcement calls for service due to the number of visitors that will be using the campground, day use areas, nature trails, and river access points. Based upon historic call types at other similar projects, the calls will most likely include thefts and vandalisms, assaults, river rescues, traffic related issues, and drug and alcohol offenses. Given the

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|---|---|
| <p>current level of staffing in the Sheriff's Department, response to these additional calls will reduce the Department's ability to handle its current call volume.</p> <p>B. Additionally, the Sheriff's Department has concerns that the proposed recreational and camping use will conflict with the nearby agricultural use, resulting in increased law enforcement calls for service to handle trespassing, vandalism, and loud noise complaints. Based upon the County experience with other recreational areas, such as the Oroville Wildlife Area, there is potential for local gang members to frequent the area and use the area for meetings and parties.</p> <p>C. Other criminal justice related impacts on the County are not discussed or addressed. The drain on County resources does not end once a call is responded to and an arrest made. The arrestees are then held in the County jail (at County cost), prosecuted by the County District Attorney (at County cost), defended by the County Public Defender (at County cost), and sentencing reports and follow-up for the State Court are provided by the County Probation Department (at County cost). These additional criminal justice costs are also incurred by the County if a law enforcement agency other than the County Sheriff makes an arrest, including State law enforcement.</p> | <p>L1-49
Cont'd</p> <p>L1-50</p> <p>L1-51</p> |
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FIRE DEPARTMENT COMMENTS:

- | | |
|--|--|
| <p>A. The Draft EIR, on page 3-23, states that the closest fire station is Station 43. The County closed Station 43 in 2000; the site is now occupied by Chico Station 6. The closest fire station and the first due engine, through an automatic aid agreement between Butte County and the City of Chico, would be Chico Station 6 located at 2544 State Route 32. For multiple engine responses, County Stations 41 (13871 Hwy 99, Chico), 42 (10 Frontier Circle, Chico), and 44 (2334 Fair Street, Chico) would respond respectively. Response times from the various stations are as follows: Chico Station 6 (approximately 6 minutes 15 seconds), County Station 41 (approximately 9 minutes 11 seconds), County Station 42 (approximately 12 minutes 6 seconds), and County Station 44 (approximately 14 minutes 41 seconds). Butte County is statutorily responsible for fire, life and safety incidents at the site due to its location in the Local Responsibility Area. Historic data for the past three (3) years indicates there have been approximately 45 calls over the three-year period in the Scotty's Boat Landing and Hwy 32/River Road area. The County anticipates that number to rise if the project is approved as proposed.</p> <p>B. The Draft EIR, on page 3-23, discusses implementation of Park Plan Goals and Guidelines. Missing in the discussion is mention of vegetation management that will lessen the danger and impact of fires if they occur. The plan states that it will return the project area to a historically natural state, including annual grasses, oaks and some brush species that are all more fire prone than the orchards currently in the project area.</p> <p>C. The roads within the park appear to be wide enough for emergency equipment, though the Fire Department is concerned about the turning radius and the single point for ingress and egress. The Department suggests that an exit road be added as part of the proposed project.</p> <p>D. The increased vehicle traffic and foot traffic within the park area will increase the demands for EMS, rescue, Haz-mat, and fire suppression. Due to the travel time for local fire and rescue resources to respond, State Park employees should be trained on how to use an Automated Electronic Defibrillator (AED) and have one on site.</p> <p>E. Due to the location and the close proximity of the Sacramento River an emergency road access to the river should be considered for water rescues.</p> | <p>L1-52</p> <p>L1-53</p> <p>L1-54</p> <p>L1-55</p> <p>L1-56</p> |
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OTHER COMMENTS:

In addition to County staffs' concerns, the County has received communications from the general public that should be addressed. Two of the communications are attached and, in summary, include:

- A. Concerns that the State has stated that it can only review the environmental impacts caused by its project to its property and that the State will not take into consideration the impact upon the county, neighboring properties, residences and farming operations. *The County is very concerned if such statements have been made since they would be in violation of the California Environmental Quality Act.* | L1-57
- B. Concerns that the hydrology reports are not accurate. *Once again, the County has concerns that if the facts are incorrect the analysis is flawed.* | L1-58
- C. Restoration of areas back to riparian habitat may cause roadway erosion that does not currently exist. | L1-59
- D. There will be an increase in traffic on a roadway that is already less than two lanes with no shoulder and is commonly used by cyclists thereby increasing the probability of vehicle vs. pedestrian accidents that the Butte County Sheriff's Office and Fire Department will have to contend with. In order to mitigate this impact, the Project would have to widen the roadway and add striping with dedicated pedestrian crossings and speed control signage. | L1-60
- E. There is no safe river access anywhere near the proposed campground. | L1-61
- F. The proposed campground and walking trails are situated with two privately owned parcels in between them. There may be an increase in trespass calls to the Sheriff's Department. | L1-62
- G. The State has confirmed that the proposed park area floods on an annual basis. It does not seem concerned with the impact of storm water contamination or what will happen to all of their structures and waste when the flood waters carries them downstream onto private property or County roads. The cleanup costs will be left for the property owners and the County. | L1-63
- H. Concerns regarding the impact on existing agricultural uses that mirror the concerns stated earlier by the Agricultural Commissioner. | L1-64
- I. The State of California is proposing a development that defies the principal of the Greenline and is in conflict with the Butte County General Plan. | L1-65
- J. The State is proposing a project that would not be allowed if proposed by a private landowner; a proposal for a revenue-generating campground. If a private individual wanted to put an RV park on a parcel zoned AG 40 on the west side of the Greenline, they would not be able to. | L1-66
- K. The fact that this project is even being considered, given the current proposal to shut down an existing facility only 15 minutes away (Woodson Bridge State Park) and the totally inappropriate location of this new facility is puzzling. Why would the State invest the resources and funds to build a new facility, when it is proposing closing others throughout the State? | L1-67

In conclusion, based upon the specific goal of the California Environmental Quality Act (CEQA) "for California's public agencies to identify the significant environmental effects of their actions and either a) avoid those significant environmental effects, where feasible or b) mitigate those significant environmental effects, where feasible," the County finds the Draft EIR to be completely inadequate because it contains inaccurate information and ignores major environmental impacts. The California State Parks' website states | L1-68

"the California Environmental Quality Act is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible." The California State Parks' fails to meet the requirements of CEQA in its Draft Environmental Impact Report on the proposed project. **Please provide any response to this letter and all future notices to: Butte County Board of Supervisors, 25 County Center Drive, Oroville, CA 95965.**

L1-68
Cont'd

L1-69

Thank you for your consideration in this matter. Brian Haddix, Chief Administrative Officer, will be contacting you to further discuss the County's concerns, due to the fact that the County did not receive notice of the public hearing held in February 2008 on this issue. If you would like to contact Mr. Haddix directly, he can be reached at (530) 538-7224.

L1-70

Sincerely,



Curt Jostassen
Chair, Butte County Board of Supervisors

cc: Brian Haddix, Butte County Chief Administrative Officer
Bruce Alpert, County Counsel
Tim Snellings, Butte County Department of Development Services
Henri Brachais, Cal Fire/Butte County Fire Department
Phyllis Murdock, Butte County Public Health Department
Mike Crump, Butte County Public Works Department
Richard Price, Agricultural Commissioner
Perry Reniff, Butte County Sheriff
Governor Arnold Schwarzenegger
Mike Chrisman, Secretary, State Resources Agency
Ruth Coleman, Director, California State Parks
Stephanie K. Meeks, Executive Director, The Nature Conservancy
Cynthia Bryant, Director, The Governor's Office of Planning and Research

Enclosed:

- E-mail from Justin and Jamee Mendonca to Supervisor Dolan and Mr. Crump (2/29/08)
- Letter from Clint Maderos to Supervisor Dolan (2/24/08)
- Letter from the Butte County Farm Bureau (9/25/07)
- Butte County Resolution 07-021, Williamson Act Exhibit A

From: Moghannam, Kathleen
Sent: Friday, February 29, 2008 2:04 PM
To: McCracken, Shari; Alpert, Bruce; Snellings, Tim; Reniff, Perry
Subject: FW: Proposed River Road Campground
This was forwarded to Board members and CAO today and will be included in Board Correspondence.

From: Jamee Silveira [mailto:jsilveira@ur.com]
Sent: Friday, February 29, 2008 12:02 PM
To: Moghannam, Kathleen; Crump, Mike
Cc: info@chicogreenline.com
Subject: Proposed River Road Campground

Kathleen, could you kindly ensure that this correspondence is forwarded to all supervisors?

Dear Supervisors and Mr. Crump,

My husband and I have been attending the public information meetings regarding the EIR on the proposed Bidwell-Sacramento River State Park on River Road. The State of California has not been receptive to our concerns during this phase because they continue to state the they can only review the environmental impacts caused by their project to their property. They will not take into consideration the impact upon our county, neighboring properties, residences and farming operations.

L1-71

We would appreciate the opportunity to share our concerns:

- The hydrology reports are not accurate. They only take into consideration the water flow from the Sacramento River. There are three other tributaries that flood the area (more regularly than the river) that are not in the projections. The reports also do not consider the fact that there are two parcels in between the Nicolaus and Singh properties that will not be restored back to natural habitat. Therefore they cannot state that their EIR is feasible.

L1-72

There could be a considerable impact to River Road and the river bank at the washout if the river is restored back to riparian habitat and allowed to "meander". *Is Butte County prepared to maintain and protect their roadway to erosion?*

L1-73

- There will be an increase of traffic on a roadway that is already less than two lanes, this traffic would include RV's and trucks pulling boats and travel trailers. This roadway is commonly used by cyclists, there is no shoulder. There will be an increase of pedestrian traffic due to the proximity of the campground to the river. There is great probability for vehicle vs. pedestrian accidents that the Sheriff's office will have to contend with. Or, the county will have to widen the roadway and add striping with dedicated pedestrian crossings and speed control signage. There is not a safe river access anywhere near the proposed campground. There is potential for an increase in medical calls and water rescues; all at the expense of the county.

L1-74

L1-75

L1-76

- The proposed camp ground (with walking trails) is situated with two privately owned parcels in between them. There will be an increase in trespass calls to the Sheriff's department, as the Parks Department has indicated that they to not have an obligation to control where their patrons walk. "The landowners are more than welcome to place no trespassing signs on their property if they feel that people would use private property for access."

L1-77

- The state has confirmed that the proposed park area floods on an annual basis. They do not seem concerned with the impact of storm water contamination or what will happen to all of their structures and waste when the flood waters carries them downstream onto private property or county roads. The cleanup costs will be left for the property owners or county.

L1-78

- Due to the fact that we are actively farming our property (well beyond the green line) we have addressed set-back concerns

L1-79

file://K:\AD\SHARI\Projects\Bidwell-Sac River Campground\FW Proposed River Road Campground.htm 3/4/2008

with the State Parks. They have conceded to plant native grasses with a 100' set back to our orchard; this does in fact *marginally* satisfy the environmental affects of riparian habitat and native grasses to a dedicated orchard. However, there are normal farming practices that are not compatible with the RV and camping lifestyle; ie. air blast spraying, chopping, mechanical pruning, aerial applications, and harvesting. All of these functions cause dust, loud noise, the potential of exposure and may not be performed between the hours of 8 a.m. and 5 p.m. Therefore, we have great concern that we will not be able to continue to farm the orchard at 100% of its' potential on property that is zoned solely for agricultural use.

L1-79
Cont'd

The State of California is proposing a development that defies the principal of the greenline. They were able to remove this property from the Williamson act because the re-forestation and riparian habitat are "not permanent" they could easily be converted back to farm ground.

L1-80

Even though this project will in fact restore natural habitat, the state is failing to put an emphasis on the reality that this is a revenue generating campground all at very little overhead or long term cost effect to them.

L1-81

If a private individual (such as ourselves) wanted to put an RV park on a parcel zoned AG 40 and outside of the greenline, we would not be able to. Is this campground part of the general plan? Does it set a precedent for Butte County that the greenline means nothing?

L1-82

If this project continues there will be great fiscal impacts on Butte County.

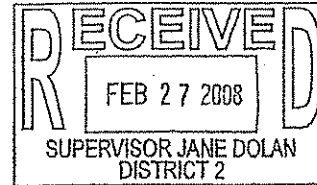
L1-83

We have great concern regarding this endeavor and implore you to review the EIR at http://www.parks.ca.gov/?page_id=24873, consider our comments and reply to the State of California in writing by March 17th.

Justin and Jamee Mendonca

*4393 Chico River Road
Chico, CA 95928
530-899-1040
530-570-9061 cell*

Clint Maderos
Clint Maderos Backhoe Service
12102 River Road
530-345-8665
530-514-8665



Supervisor Jane Dolan
196 Memorial Way
Chico CA 95926

February 24, 2008

Dear Jane Dolan,

I am writing to call your attention to a development close to your district, but of concern to Butte County land use issues. I recently received a DEIR in the mail from the California Department of Parks and Recreation. The subject of the DEIR is the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project. The plan laid out is disturbing due to the negative impacts it will have on my orchard income and my day-to-day quality of life.

The State Parks plan to put a large campground on 170 acres of existing walnut orchard, and plant a dense jungle of indigenous trees for riparian habitat. The land was purchased by the Nature Conservancy and is contiguous to the entire southern edge of my property. They also plan to restore habitat on another 40 acre existing walnut orchard. The two parcels are separated by an 80 acre property, half of which is existing orchard. Additionally, they plan to install a day use area on my western property line. I am deeply concerned about the negative impact I foresee this plan will have on me and my life for several reasons.

- At issue is water hydrology, i.e. Mud Creek/Rock Creek flood water patterns will be altered in the process of transferring agricultural development into restored natural habitat. The effect I predict can be likened to the installation of a fine screen or sieve installed in a large drain. I predict water will remain standing in my orchard at a higher elevation for longer periods of time.
- Mud Creek, Rock Creek/Kusal Slough, Lindo Channel, Chico Creek, which all border the easterly boundary of this proposed project were not included in the DEIR Survey. This DEIR is incomplete without analysis of the flood water patterns from the above creeks. They flood these properties annually.
- They have proposed a 100 foot grassland buffer zone on the southern property line; this will be insufficient.
- There is no buffer zone planned for the Day Use Area, which will be set 65 feet from my front window.

L1-84

L1-85

L1-86

L1-87

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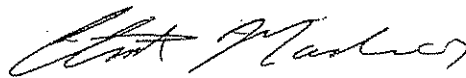
FEB 29 2008

COUNTY OF BUTTE
PUBLIC WORKS DEPT.

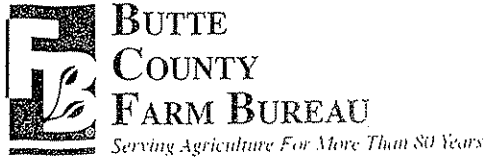
- They have proposed a 100 foot grassland buffer zone on the southern property line; this will be insufficient. | L1-87
- There is no buffer zone planned for the Day Use Area, which will be set 65 feet from my front window. | Cont'd
- The existing Day Use Area 600 ft from my home is a constant source of late night noise by revelers, more frequently on the weekends. Placing this in such close proximity to my home, the only occupied home in the area of the study, is utterly unreasonable and unfair to me. | L1-88
- There is an existing State Park campground 15 miles north of this proposed plan site, Woodson Bridge State Park. The State Park Sector Superintendent Denise Reichenberg, acknowledged at the public hearing, February 19, 2008, that this campground is not consistently operating at full occupancy. | L1-89
- The public hearing I attended would not address the social consequences this plan may have on me, or the consequences to the neighborhood, or to the larger surrounding area. | L1-90
- Numerous concerns presented by Sacramento River Reclamation District have been ignored. | L1-91
- Numerous concerns from other neighboring landowners were not adequately addressed in the scoping comments because they were not notified of the plan by mail. The DEIR does not analyze the impacts of the park on orchards east of the plan. | L1-92
- It is deeply disturbing that this invasive plan was put in motion without a mailed notification to alert me. This reveals a fundamental lack of courtesy on a human level that is dumbfounding. | L1-93
- | L1-94

I would like to speak with you about the specifics regarding the concerns I have regarding the negative impact this plan will have on me and the neighboring orchards in your district. Please get in touch with me at 530-514-8665, or 530-345-8665. I thank you for your attention to this matter, and I look forward to hearing from you.

Sincerely yours,



Clint Maderos



September 25, 2007

Mrs. Denise Reichenberg
Superintendent – Valley Sector
California State Parks
525 Esplanade
Chico, California 95926

Dear Mrs. Reichenberg,

The Butte County Farm Bureau (BCFB) would like to submit the following comments for the proposed Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project (Project):

It is the opinion of the BCFB that state, local and federal agencies should not acquire agricultural land for the purpose of fish, wildlife, and habitat protection or public recreation. Furthermore we also believe the definition of “recreational activities” as defined under the California Land Conservation Act (Williamson Act), should exclude uses that result in the cessation of agricultural pursuits on contracted land or that have negative impacts on adjacent agricultural lands.

L1-95

According to the Butte County Department of Development Services, a significant portion of the Project is currently listed under the Williamson Act. Again, it is the opinion of the BCFB that Williamson Act contracted land should not be acquired by a government entity or joint powers authority to expand parks or wildlife refuges. These uses are incompatible with the continued agricultural use of surrounding agricultural properties.

Additionally it should be noted that according to the Butte County Right to Farm Ordinance (35-2(b)), “Where nonagricultural land uses extend onto agricultural land or exist side by side with agricultural operations, agricultural operations are frequently the subject of nuisance complaints. As a result, some agricultural operations are forced to cease or curtail their operations and many others are discouraged from making investments in improvements to their operations, all to the detriment of adjacent agricultural uses and the economic viability of the county’s agricultural industry as a whole. It is the purpose and intent of this chapter to reduce the loss to the county of its agricultural resources by limiting the circumstances under which properly conducted agricultural operations on agricultural land may be considered a nuisance.”

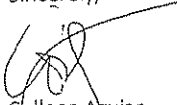
L1-96

As a result of the above comments, it is the opinion of the BCFB that the Project would not benefit the proposed area location and will only create a negative impact to the economic viability of the surrounding agricultural properties.

L1-97

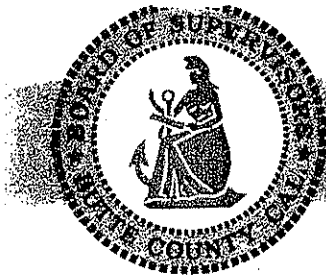
Should you require further explanation of the above comments, please contact us at (530) 533-1473 or at buttecfb@sbcglobal.net. We thank you for the opportunity to comment on this proposed project.

Sincerely,



Colleen Aguiar
Executive Director

Exhibit A Resolution 07-021



BOARD OF SUPERVISORS
COUNTY OF BUTTE, STATE OF CALIFORNIA

Resolution No. 07-021

**RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF BUTTE,
SUPERSEDING AND REPEALING RESOLUTION 00-49, AFFIRMING THE PURPOSE,
AMENDING ADMINISTRATIVE PROCEDURES AND UNIFORM RULES, INCLUDING
COMPATIBLE USES FOR LAND SUBJECT TO LAND CONSERVATION ACT
(WILLIAMSON ACT) CONTRACT**

WHEREAS, the Board of Supervisors of the County of Butte, State of California, on December 5, 1967, established the agricultural preserves pursuant to the Land Conservation Act of 1965; and

WHEREAS, the Land Conservation Act of 1965 (Williamson Act) requires that uniform rules be established including compatible uses; and

WHEREAS, the Legislature periodically amends the rules of the program; and

WHEREAS, it is the desire of the Board of Supervisors to update its administrative procedures and rules applicable for the processing of contracts and agreements regarding all land subject to Land Conservation Act Contracts; and

WHEREAS, the Board of Supervisors, after conducting a public hearing and having reviewed the evidence presented at said public hearing, and considering the recommendation of the Land Conservation Act Advisory Committee, does hereby find it to be in the public interest to adopt the revised Butte County Administrative Procedures and Uniform Rules for Implementing the California Land Conservation (Williamson) Act as described herein in Exhibit "A".

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors affirms and establishes the following purposes for use of the Williamson Act in Butte County:

1. To conserve land for viable agricultural production and open space; and
2. Preserve agricultural land and open space lands by discouraging premature and unnecessary conversion to urban uses; and
3. To create incentives for additional agricultural landowners to participate in and enjoy the benefits of the Williamson Act program; and
4. To minimize residential conflicts in agricultural preserve areas.

NOW, THEREFORE, IT IS RESOLVED that the Board of Supervisors does hereby establish regulations governing lands subject to agricultural preserves and land conservation contracts in accordance with the California Land Conservation Act of 1965, also known as the Williamson Act, being Chapter 7 (commencing with section 51200) of part 1 of Division 1 of

Chapter 5 of the Government Code, in the unincorporated area of the County of Butte, as set forth in Exhibit "A" attached hereto and by this reference made a part thereof;

BE IT FURTHER RESOLVED that Resolution No. 00-49 is hereby superseded and repealed.

PASSED AND ADOPTED by the Butte County Board of Supervisors this 23rd day of January 2007 by the following vote:

AYES: Supervisors Connelly, Kirk, Josiassen, Yamaguchi and Chair Dolan
NOES: None
ABSENT: None
NOT VOTING: None

JANE DOLAN, Chair
Board of Supervisors

ATTEST:

PAUL MCINTOSH, Chief Administrative Officer
and Clerk of the Board of Supervisors

By: _____
Deputy

EXHIBIT "A" OF RESOLUTION 07-021
OF THE BOARD OF SUPERVISORS OF THE COUNTY OF BUTTE

*Butte County Administrative Procedures and Uniform Rules for
Implementing the California Land Conservation (Williamson) Act*

January 23, 2007

Policy, Procedures and Rules Declaration

Butte County's objective in implementing the California Land Conservation Act of 1965 (also referred to in these rules and procedures as the Williamson Act) Chapter 7, commencing with Section 51200, of Part 1, of Division 1, of Title 5, of the California Government Code is the promotion of agricultural productivity and the preservation of agricultural land and open space lands by discouraging premature and unnecessary conversion to urban uses.

The County's Resolution to implement the Williamson Act provides a common set of rules and procedures that apply to the standards and categories of property eligibility, the permitted and compatible land uses and restrictions on Williamson Act contract lands, procedures for creation and termination of Williamson Act contracts, and procedures for compliance monitoring and enforcement.

A Williamson Act contract is an agreement entered into voluntarily and with full knowledge of the benefits and requirements of the Williamson Act, by and between the property owner and the County, to restrict the use of the land for agricultural, open space and compatible uses for a minimum term of ten (10) years, in return for a reduction in property taxes on the land.

RULE 1 GENERAL PROVISIONS

- A. **Short Chapter Citation.** These rules and procedures shall be known and may be cited as the "Butte County Williamson Act Uniform Rules and Procedures". In these rules and procedures the terms Land Conservation Act and Williamson Act are used interchangeably.
- B. **General Rules for Interpretation.** Terms used in these rules and procedures shall be as defined in Section 51201 of the California Government Code, or other applicable codes as referenced herein. Words in the present tense shall include the future; the singular shall include the plural; the word "shall" is mandatory and not directory. Whenever reference is made to any portion of these rules and procedures

or any other ordinance, resolution or law, the reference shall apply to all amendments and additions now or hereafter made.

- C. **Regulations.** Regulations set forth in this document and the provisions of the California Land Conservation Act of 1965 as set forth in the Government Code, must be complied with. In the case of inconsistency the more restrictive of the two shall apply. The rules and procedures described and detailed in this document are also referred to herein as "regulations".
- D. **Designation of the Lead Department.** The Butte County Department of Development Services, Planning Division shall be the lead County department for all Williamson Act program management, inclusion applications, Williamson Act contract non-renewals, and contract cancellations.

RULE 2 REGULATION OF USES

- A. **General.** Use of land under a Williamson Act contract shall be in accordance with State Williamson Act regulations, and these policies, rules and procedures. The determination of consistency of a use with the Williamson Act does not in itself entitle the landowner to that use. The proposed use is also subject to all County, State, and federal laws and regulations. Where there is a conflict between these rules and procedures and other governmental laws and regulations the more restrictive shall prevail.
- B. **Determination of Compatibility of Uses with the Williamson Act.**

A use may be allowed on Williamson Act contracted land when the Board of Supervisors determines the use to be compatible with the Williamson Act, per the three principles of compatibility in Section 51238.1(a), and consistent with these rules and procedures. A determination of compatibility may be made in one of the following ways:

 - 1. At the request of the Director of the Department of Development Services, the LCA Committee will convene and assess the compatibility of a proposed use. The Committee shall make a determination of compatibility or non-compatibility for the proposed use with the Williamson Act. For conditional uses, the Committee may recommend conditions or mitigations that would be required to make the use compatible with the Williamson Act. Compatibility determinations of the LCA Committee shall be reported to the Board of Supervisors as recommendations.
 - 2. A determination of compatibility may be made in one of the following ways:
 - a. On a case-by-case basis, the Director of the Department of Development Services or her/his designee shall review all requests for an initial determination of compatibility of a use

with the Williamson Act and these rules and procedures. The Director's initial determination shall be reported to the LCA Committee by informational memorandum and agendaized for review. The LCA Committee shall review the Director's determination and make a recommendation to the Board of Supervisors.

b. In cases where the Director of Development Services determines that a compatibility finding is not clear, the Director shall refer the case directly to the LCA Committee. The Committee may make a determination of compatibility or non-compatibility for the proposed application in the form of a recommendation to the Board of Supervisors.

3. While the LCA Committee makes determinations of compatibility of uses with the Williamson Act, consideration of land use entitlement applications, including but not limited to use permits and mining permits, are the responsibility of the Butte County Planning Commission. In such cases, the Planning Commission approval is "conditional", pending a Board of Supervisors determination of the compatibility of the use with the Williamson Act per Section 51238.1. In the case of use compatibility determinations related to a land use entitlement application, the Board's determination is reported to the Planning Commission by informational memorandum.

RULE 3 QUALIFYING USES ON WILLIAMSON ACT LAND

A. **Uses that Qualify as Primary Agricultural Uses.** Per Section 51238.1 the Board of Supervisors has determined that the following uses are compatible with the Williamson Act. The determination that the uses listed below are compatible with the Williamson Act does not in itself entitle the landowner to these uses. The uses listed below are also subject to all County, State, and federal laws and regulations. The more restrictive regulation, whether Williamson Act or other government code shall apply. Except as otherwise provided in these rules and procedures, the following uses qualify as compatible uses on land for inclusion in the Williamson Act. The LCA Committee shall, on a case by case basis as necessary, consider and make a recommendation to the Board concerning whether a proposed use is consistent with uses including but not limited to the following compatible uses:

1. General farming, ranching, horticulture, commercial livestock production (including hog ranches, dairies, dairy and beef cattle feedlots), commercial poultry production, and similar activities (except as limited by Rule 3.C. below).
2. Livestock pastures and grazing.
3. Aquaculture facilities.
4. Operation of apiaries.
5. Cultivation of tree, vine, row and field crops.

6. Growing of ornamental and agricultural nursery stock.
7. Greenhouse structures.
8. Growing of Christmas trees.
9. Prime agricultural lands fallow for not more than three years out of five.
10. Processing, packing, selling and/or shipping of agricultural products per Butte County Zoning Code Section 24-9- (b) (3).
11. Customary agricultural buildings, structures, and necessary equipment for the maintenance and support of the uses listed above.
12. One single-family residence or modular home for persons working in direct support of agricultural production on the Williamson Act contracted land. One such residence is allowed on each legally-created parcel within the contracted lands that conforms to minimum acreage standards in TABLE ONE of Rule 5.
13. Agricultural Employee Housing facilities (including manufactured homes) to accommodate only agricultural employees and their families. This agricultural worker housing is allowed in the Butte County "Agricultural" zoning districts only pursuant to zoning code Section 24-90 (a) (5).
14. The drilling for hydrocarbon, including the installation and use of such equipment, structures, and facilities as are necessary per Section 51238, so long as these activities do not interrupt or impair the primary agricultural use or secondary approved compatible use on the land.
15. Water storage reservoirs and irrigation areas which are required for the direct support of the agricultural operations on Williamson Act contracted land. Private recreational lakes are not compatible uses on Williamson Act land.

B. Accessory Uses to Primary Agricultural Uses. Per Section 51238.1 the Board of Supervisors has determined that the following are compatible accessory uses, as long as they are incidental, related, appropriate, and clearly subordinate to the primary agricultural use (as provided in Rule 3 A) which do not significantly alter or inhibit the primary use on the land. The accessory uses listed below must also be in conformance with all County, State, and federal laws and regulations and may require a use permit. Except as otherwise provided in these rules and procedures, the following accessory uses qualify as compatible uses on land for inclusion in Williamson Act. The Director of Development Services or the LCA Committee (per procedures in Rule 2 B) shall, on a case by case basis as necessary, consider and make a determination whether a proposed use is consistent with uses including but not limited to the following compatible uses:

1. Those uses normally associated with a single-family residence use and are in conjunction with or incidental to the residential use, including but not limited to a garage, workshop, shed, garden,

private swimming pool, private tennis court, gazebo, spa, etc, and as amended by zoning code.

2. Warehousing and storage of agricultural products.
3. Accessory buildings and uses pertinent to the commercial agricultural uses, including facilities to process only the agricultural commodities.
4. A stand or a display for the sale of agricultural commodities produced on the premises including the incidental sale of agricultural products produced off-site.
5. Private airport or aircraft landing facilities which are directly supportive of the agricultural operations on the Williamson Act contracted land (example: crop seeding, dusting and fertilizing).
6. Recreational uses not requiring any permanent improvements or facilities and not interfering materially with agricultural operations. This includes seasonal hunting and fishing uses with no permanent facilities, provided that any recreational vehicles and travel trailers shall be used for occupancy during non-cropping seasons only.
7. The processing and sale of firewood from orchard operations.
8. Public utility transmission and delivery lines per Section 51238.
9. Animal rendering plants and agricultural waste composting facilities.
10. Game bird production.
11. Specialized Animal Facilities: are defined as confinement care or keeping establishments for agricultural and other animals including but not limited to: husbandry of fur-bearing animal species; riding academies, accessory equestrian facilities and large scale horse raising, and kennels. Riding academies, accessory equestrian facilities and kennels require a use permit per Butte County Code Section 24-90(c) and/or the determination of the Director of the Department of Development Services. Specialized Animal Facilities may not predominate, preclude, or negatively impact primary qualifying agricultural uses on Williamson Act-contracted land. When a use permit is required, the LCA Committee shall make a recommendation to the Board of Supervisors concerning whether the proposed use is compatible with the primary use, pursuant to Section 51238.1 and Rule 5.D.

The difference between grazing/pasture and feedlot operations is defined as follows:

1. **Animal Feedlot:** a lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising, or holding of animals and specifically designed as a confinement area in which manure may accumulate, or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. Open lots used for the feeding and rearing of poultry (poultry ranges) shall be considered animal feedlots.
 2. **Grazing/Pasture:** areas where grass or other growing plants are used for grazing and where the concentration of animals is such that a vegetative cover is maintained during the growing season except in the immediate vicinity of temporary supplemental feeding or watering devices. Those areas of supplemental feeding or watering devices within a pasture do not constitute a feedlot.
- C. **Conditionally-Permitted Uses on Williamson Act Land.** All such uses must comply with Section 51238.1. Some uses listed in this rule (Rule 3) are uses that, without conditions or mitigations would not be in compliance with the Butte County Zoning Code or with Section 51238.1(a). Section 51238.1 (c) details the four findings that must be made before a conditional use permit may be granted for such uses.

Uses Allowed Only by Use Permit: Although the following uses may be found to be consistent with the Williamson Act, Butte County Code also requires that the Planning Commission approve a use permit for these uses. For each proposed use an application for a use permit shall be reviewed and verified by the Development Services Department. The Development Services Department will coordinate with the LCA Committee Chairperson to schedule a meeting of the LCA Committee for review. The LCA Committee shall consider the compatibility of the application with the Williamson Act, consistency with these rules and procedures, and shall make a recommendation to the Board of Supervisors concerning compatibility with the Williamson Act. The Board of Supervisors determines if a conditionally permitted use is compatible with the Williamson Act, per the three principles of compatibility in Section 51238.1(a). In such cases, the Planning Commission approval is "conditional", pending a Board of Supervisors determination of the compatibility of the use with the Williamson Act per Section 51238.1. By informational memorandum, the Development Services Director informs the Planning Commission of the Board of Supervisors determination.

1. **Public and quasi-public uses** (Butte County Code Section 24-90 (c) 1), including wireless telecommunication facilities, structures and buildings that conform to Sections 51238 and 51291.
2. **Veterinary hospitals and/or clinics.**
3. **Use of Williamson Act land for seasonal hunting, hunting clubs, and wildlife observation facilities** that do not interrupt or impair the primary agricultural use or approved accessory use on the land

(Butte County Code Section 24-90 (c) 4). Physical structures in support of the uses allowed by this rule may be permitted where the LCA Committee determines that said structures do not interrupt or impair the primary agricultural use or approved accessory use on the land.

4. **Surface mining mineral extraction, quarries, and all other mines** (not including asphalt and concrete batch plants). Mining is defined as any use requiring a mining permit as defined under Chapter 13 of the Butte County Code. For any mining use, the Board of Supervisors (on an individual case basis) must determine if it is possible to make the required statutory findings of compatibility under either Section 51238.1 or 51238.2. The mining proponent must provide all necessary documentation and analysis as may be required by the Department of Development Services in supporting such findings for LCA Committee, Planning Commission, and Board of Supervisors consideration. All mining must demonstrate compliance with the Surface Mining and Reclamation Act by a mining use permit and reclamation plan approved by the Butte County Planning Commission.

Mining is a compatible use with the Williamson Act under limited circumstances. In most cases, for the application to be complete, the Williamson Act contract must be terminated by nonrenewal or cancellation (Rule 6) prior to commencing a mining project. The Board may approve the following when the corresponding Williamson Act findings can be made:

- a. Phasing of a mining project on adjacent, non- Williamson Act contracted land while the nonrenewal process runs its course.
- b. Williamson Act contract rescission (Section 51256) a landowner may enter an agreement with the local government to rescind the contract on the land proposed for mining and simultaneously place other land in the same county, of equal or greater size and value, in a permanent agricultural conservation easement. Such contract rescissions require the approval of the Director of the Department of Conservation per Section 51256.1.
- c. Determination of mining as a compatible use meeting Section 51238.1(a) criteria for prime land or Section 51238.1(c) for non-prime land. The use of mineral resources shall comply with Section 51238.2. The Board must find the following:
 - That the activity will not significantly impair the Williamson Act contractual commitment to preserve prime land or non-prime land for open space use.
 - That the Williamson Act contracted land must be returned according to the SMARA reclamation standards for its previous prime or non-prime condition. Any reclamation of contracted land to "open space" use must meet the definition in Section 51201(o) per Rule 4 below.

D. **Other Uses Approved by the Board of Supervisors.** The following uses may be approved by the Board of Supervisors as compatible uses consistent with Section 51238.1 if the use does not significantly impair the primary agricultural use which qualifies the land for Williamson Act contract.

1. The following open space uses may be approved by the Board of Supervisors, after consideration by the LCA Committee:
 - a. Wildlife & biotic habitat area per Section 51201(j).
 - b. Managed wetlands area per Section 51201(l).
 - b. Recreational uses per Section 51201(n).
 - c. Scenic highways corridor (per Section 51201(i)).
2. Any other use which the Board of Supervisors, after consideration by the LCA Committee, determines to be substantially similar in nature to any of the uses listed above and which enhance other qualifying uses with no significant impact on the agricultural or open space characteristics of the subject or adjacent agricultural land, and are otherwise in compliance with the principles of compatibility as set forth in Section 51238.1.

RULE 4 QUALIFYING OPEN SPACE USES ON WILLIAMSON ACT LAND

The Board of Supervisors may approve the following "open space" uses for inclusion in a Williamson Act contract by the procedure described in Rule 5. C. below:

- A. **General Qualifying Criteria for Open Space Use.** General categories of qualified "open space" uses on Williamson Act land per Section 51205 include: managed wetlands, wildlife habitat area, recreational use, and land in a scenic highway corridor.
- B. **Required Open Space Use Findings.** To qualify as an allowed open space use, the Board of Supervisors must make the finding that the applicant's land is used for the preservation of important open space land for: wildlife habitat, managed wetlands, scenic highway corridors, or recreational uses.
- C. **Review and Approval of Open Space Uses Applications:**

The LCA Committee shall consider and make a recommendation to the Board concerning the consistency of any application with these rules and procedures. This assessment and the recommendations of the LCA Committee shall be submitted to the Board of Supervisors by the Development Services Department. The Board of Supervisors may approve Williamson Act contracts established for open space purposes, when the land is used for the purposes specified in Section 51205.
- D. **Conversion to Open Space Use:** The conversion from Agricultural use to an open space use requires execution of a new or amended contract. If the landowner is unwilling to enter into a new or amended contract, the Board of Supervisors may non-renew any contract for lands which have been converted to an open space use.

E. Procedure Regarding Existing Conservation Easements:

As instances of existing habitat conservation easements on Williamson Act land come to the attention of the County, the County will consult with the California Department of Fish and Game (CF&G) in determining if the land in question could be determined to meet the following Williamson Act (Section 51201(j)) definition of a "wildlife habitat area":

A "wildlife habitat area" is a land or water area designated by a board or council, after consulting with and considering the recommendation of the Department of Fish and Game, as an area of great importance for the protection or enhancement of the wildlife resources of the state.

If the Board of Supervisors finds that the land meets this definition, they may approve a new or amended Williamson Act contract with the landowner to reflect the change in use on the property to bring the contract into conformance with the regulations of the Williamson Act and the current uses on the land. Land shall be considered for inclusion as wildlife habitat only after a wildlife habitat area resource management plan (per Rule 5.B.1.e) has been approved by the Board of Supervisors. In many cases, the conservation easement documents recorded with the grantee conservation easement holder (e.g. CF&G, NRCS, USDA, Fish & Wildlife, etc) may contain adequate detail to serve as the required resource management plan to be recorded with the contract amendment.

RULE 5 WILLIAMSON ACT (Land Conservation Act) CONTRACTS

A. General Provisions.

1. **Agricultural Preserves.** In 1967, the Butte County Board of Supervisors established ten agricultural preserve areas that cover the County. Land that meets the criteria detailed in these policies, procedures and rules may be eligible for Williamson Act contracts.
2. **Zoning and General Plan Land Use Designations.** Parcels for inclusion must be consistent with applicable General Plan and zoning designations. Table ONE of this rule sets minimum incoming acres per contract and minimum parcel size.
3. **Primary Uses.** Only those parcels that are primarily used for agricultural production, wildlife habitat area (51201(j) and 51206) or open space use (51201 (o)) as respectively established in Rule 4 of these rules and procedures are eligible for inclusion in a Williamson Act contract.
4. **Qualifications for Williamson Act Contract.** To qualify for a Williamson Act contract, land shall be in an agricultural preserve, and be comprised of a single parcel of land, or two or more contiguous parcels, when such parcels are under the same ownership or are owned by immediate family

members and are managed as a single unit.

- a. **Minimum Parcel Size.** The minimum parcel size required for inclusion in a Williamson Act contract shall be that set forth in Table One of this rule when the parcel can sustain an agricultural use. All parcels smaller than the contract minimum size shall be legally combined or merged to comply with TABLE ONE of Rule 5, concurrently with approval of the contract.
- b. **Parcels in Different Ownership.** In considering a contract for parcels under different ownership, the LCA Committee may recommend, and the Board require that a management plan and agreement satisfactory to the Committee be recorded between the owners to ensure sustainable agricultural management of all land under contract for the duration of the contract.
- c. **Combining Parcels.** When parcels are combined under the same contract, each individual parcel must comply with the minimum acreage requirement, by type of use, as set forth in Table One of this rule. Each parcel must also currently be utilized for or proposed to be utilized for agricultural or open space uses as provided in these rules and the California Land Conservation Act.
- d. **Incompatible Uses.** The application process for inclusion in the Williamson Act requires the applicant to disclose all existing and proposed uses and structures on the land proposed for inclusion. Land occupied by incompatible uses or incompatible structures must be separately described for non-inclusion. The LCA Committee may recommend, and the Board may determine that the impacts of incompatible uses or structures render additional portions of the proposed land inappropriate for inclusion in the Williamson Act.
- e. **Application Process.** All applications must be submitted to the Department of Development Services on or before September 15 of each year to be eligible for a Williamson Act contract to become effective during the following year. Applications shall be submitted upon the forms to be supplied by the Planning Division of the Department of Development Services and must be deemed to be complete, prior to October 1, in order to be eligible for actual consideration by the LCA Committee and the Board.
- f. **Easement Exchange.** Substitution for a portion of contract lands may occur pursuant to Section 51256 and 51257.
- g. **Adding Lands to a Williamson Act Contract.** Land may be added to an existing Land Conservation Agreement. Any parcel added must meet the minimum acreage requirements in Table One of this rule or be legally combined with an existing parcel within the agreement per the Subdivision Map Act and local regulations.

- h. **Lands Bordering Cities and in Special Planning Areas.** When considering inclusion of lands within urban spheres of influence, lands within specific plan areas and lands within special planning areas, the LCA Committee and the Board of Supervisors shall consider whether such lands are subject to specific plans, special plans and/or joint planning memorandums of understanding and similar policies.
5. **Minimum Parcel Size and Acreage for Williamson Act Contracts.** The required minimum acreage for each application is based on the type of agricultural activity and shall be as follows:

TABLE ONE:

Type of Activity	Minimum Incoming Acres per Contract and Minimum Parcel Size
Orchards (vineyards, kiwi, fruit, nut and similar crops)	20
Field Crops (irrigated row-crops, small grains, and similar crops)	80
Irrigated Pasture or Irrigated Rice Production	80
Open Space Uses	80
Dry Land Grazing	160

- a. Parcels must also meet or exceed minimum lot sizes established by the applicable base Butte County zoning district. Minimum parcel size applies to incoming Williamson Act contract parcels, parcels eligible for home building permit, and parcels eligible for sale or transfer. When possible, land owners may merge adjacent parcels to attain the minimum acreage required in Table ONE. When the minimum parcel acreage in TABLE ONE of this rule is greater than that set forth in the text of the property's original Williamson Act inclusion contract, the less restrictive (smaller) minimum parcel size shall apply.
- b. The acreage limitations in TABLE ONE above shall apply to the use of the subject lands on the date of signing the Land Conservation Agreement. After the signing of the Land Conservation Agreement, the type of crop or agricultural use

may be changed at the sole discretion of the landowner. However, at a minimum the use must remain consistent with the level of agricultural activity on which contract approval was based. Any changes in use are subject to the qualifying compatible uses described in Rule 3 herein.

- c. Land shall be permitted to be divided into parcels that do not meet the minimum parcel sizes provided in these rules and procedures only when such division is for the purpose of transferring ownership from one immediate family member to another in accordance with Section 51230.1 and Rule 7. D. Subsequent sale of such parcels to nonfamily members is contrary to Williamson Act policy and to these rules.
- d. The minimum parcel size required for establishing a residential use or for selling parcels in the Williamson Act devoted to orchards, open space and dry land grazing shall be as established in Table One except when the minimum parcel acreage in Table One of this rule is greater than that set forth in the text of the property's original Williamson Act inclusion contract. In such cases, the less restrictive (smaller) minimum parcel size shall apply.
- e. All parcels smaller than the Williamson Act contract minimum size shall be legally merged to comply with Table One above, concurrently with approval of a contract for inclusion into the Williamson Act.
- f. Two percent (2%) deviations from the specified Williamson Act contract acreage minimum in TABLE ONE above may be allowed subject to review by the LCA Committee and approval by the Board of Supervisors.

6. Terms of Williamson Act Contracts.

- a. The Williamson Act contract shall be binding upon, and inure to the benefit of, all successors in interest of the property owner in accordance with Section 51243.
- b. The Williamson Act contract shall be for an initial term of ten years. The ten year term shall automatically renew on January 1 of each year, unless a notice of non-renewal is submitted per Rule 6.A. and B.
- c. All Williamson Act contracts shall have a common anniversary date of the 31st day of December. A land conservation contract

must be executed on or before such date to be in effect for the next succeeding tax year.

- d. The Williamson Act contract shall limit the uses of the land to those provided for in these rules and procedures.
 - e. The Williamson Act contract shall require that the land be managed in accordance with any applicable resource management plan(s). If a plan amendment is approved, the amended plan shall be deemed automatically incorporated into the contract as though fully set forth therein without the need for a contract amendment.
7. **Material Breach.** In addition, and without altering the applicability of the provisions of this paragraph, the Owner acknowledges the specific material breach provisions and remedies of Section 51250, a copy of which will be attached to the Williamson Act contract as Exhibit B. Section 51250(b) defines a material breach on land subject to a Williamson Act contract as a commercial, industrial or residential building(s), exceeding 2,500 square feet that is not permissible under the Williamson Act contract, local uniform rules or ordinances. This regulation only applies to structure(s) that have been permitted and constructed after January 1, 2004. Section 51251 allows a local government or landowner to bring any action to enforce any contract, including but not limited to, enforcement by specific performance or injunction.

B. Procedures for a Williamson Act Contract

1. **Application for Williamson Act Contract or Contract Amendment.**
To enter into or to amend a land conservation contract, an application executed by all persons having legal and equitable interests in the land shall be submitted to the Development Services Department on a form prescribed by that Department. In addition to the application, applicable fees as established in Chapter 3 of the Butte County Code shall be submitted to the Department on or before September 15 of the calendar year for the contract to become effective January 1 of the succeeding year.

The application shall include the following:

- a. A copy of a recorded map or assessor's parcel map showing the subject real property as a single parcel or parcels when such parcels are under the same ownership, or are owned by immediate family members, and are managed as a single unit.
- b. A legal description of all individual parcels and the names and addresses of all the owners of legal or equitable interest in the property.
- c. Any resource management plan(s) pursuant to Rule 4.

- d. Payment of applicable Williamson Act Inclusion Agreement application fee.
- e. Any additional information the LCA Committee may require, in order enabling the Committee to determine the eligibility of the land involved for a Williamson Act contract.
- f. Any one or a combination of the following, pursuant to the provisions of Rule 4 and this rule:
 - **Agricultural Use.** A statement by the applicant describing the type and quantity of the commercial agricultural use including but not limited to how the parcel or parcels of land are to be commercially utilized for the production of food or fiber. This statement should include methods of production, acreage, improvements, a description and/or map of all appurtenant structures, accessory uses, and any other information that describes the nature and scope of the commercial agricultural use.
 - **Open Space for Wildlife Habitat Area.** Lands shall be considered for inclusion only after a wildlife habitat area resource management plan has been approved by the Board of Supervisors, subsequent to compliance with Section 51201(j) regarding the land's value as an area for the protection or enhancement of the wildlife resources of the state. A wildlife habitat area resource management plan may be approved by the Board of Supervisors prior to the Williamson Act contract.

Section 51201(j) defines a "wildlife habitat area" as: "a land or water area designated by a board or council, after consulting with and considering the recommendation of the Department of Fish and Game, as an area of great importance for the protection or enhancement of the wildlife resources of the state".

- **Open Space for Managed Wetland Area.** Lands shall be considered for inclusion only after a managed wetland area resource management plan has been approved by the Board of Supervisors, subsequent to the Board's determination of compliance with Section 51201(l). A managed wetland area resource management plan may be approved by the Board of Supervisors prior to the Williamson Act contract.

Section 51201(l) defines a "managed wetland area" as: "an area, which may be an area diked off from the ocean or any bay, river or stream to which water is occasionally admitted, and which, for at least three consecutive years

immediately prior to being placed within an agricultural preserve pursuant to this chapter, was used and maintained as a waterfowl hunting preserve or game refuge or for agricultural purposes.”

- **Open Space for Recreational Use.** Lands shall be considered for inclusion only after a resource management plan has been approved by the Board of Supervisors for recreational use facilities for use by the public. A master plan for providing recreational use may be approved by the Board of Supervisors prior to the Williamson Act contract, pursuant to 51201(n).
 - **Open Space for Scenic Corridor.** Lands shall be considered for inclusion only after a resource management plan for a scenic corridor has been approved by the Board of Supervisors in accordance with a specific plan adopted by the county for the scenic route that has been approved by the State Department of Transportation Advisory Committee on a Master Plan for Scenic Highways. A resource management plan for a scenic highway corridor may be approved by the Board of Supervisors prior to the Williamson Act contract.
2. **Review of Williamson Act Application.** An application to enter into or amend a Williamson Act contract shall be received by the Development Services Department. The Development Services Department shall coordinate with the LCA Committee Chairperson to then schedule a meeting of the LCA Committee for review and recommendation to the Board of Supervisors. The LCA Committee shall consider the consistency of the application with these rules and procedures. The recommendation of the LCA Committee shall be submitted to the Board of Supervisors by the Development Services Department.
 3. **Action on Williamson Act Contract Application.** The Development Services Department shall submit a report to the Board of Supervisors containing the recommendation of the LCA Committee concerning the contract. Upon receipt of the report, the Clerk of the Board shall schedule the matter for public hearing and give notice as provided in Section 24-25.40 of the Butte County Code and in Sections 51232 and 51233. The Board of Supervisors shall render its decision to deny, modify or approve the application for entering into or modifying a Williamson Act contract within 60 days after receipt of the report from the Development Services Department. Upon approval of the application, the Chairman of the Board of Supervisors shall be authorized to sign the contract on behalf of the County.
 4. **Recordation of Williamson Act Contract.** Within 20 business days of approval of the contract by the Board of Supervisors, the Clerk of the Board shall record the contract, which shall describe the land subject thereto, with the County Recorder and distribute copies of the recorded

contract to the landowner, the Department of Conservation, County Assessor, Development Services Department and Agricultural Commissioner.

5. **Changing Uses on Contracted Land.** No part of these rules and procedures allow the landowner, during the course of the Williamson Act contract, to change uses on the land to uses that are incompatible with these rules and procedures and the Williamson Act.

6. **New Contract Required Upon Granting of Entitlements.**
In granting of any of the following discretionary entitlements, the County reserves the right to require rescission of the current Williamson Act contract and/or signature of a new or amended contract which incorporates all Butte County Williamson Act rules and procedures in force at the time:
 - a. Tentative Parcel Map
 - b. Tentative Subdivision Map
 - c. Use Permit
 - d. Lot Line Adjustment
 - e. Merger of Parcels

RULE 6 TERMINATION OF WILLIAMSON ACT CONTRACTS

- A. **Nonrenewal of Williamson Act Contract.** Non-renewal is always the preferred means of terminating a contract. On each anniversary date of a Williamson Act contract, the original ten year term of the contract is automatically renewed unless notice of nonrenewal is given in accordance with the California Land Conservation Act for all or a portion of the property subject to the contract (Section 51244). When notice is provided on or before September 30 the contract shall expire nine (9) years from December 31 of the year that a timely notice was provided (Section 51245). Upon recordation of the notice of nonrenewal, the valuation formula under the Revenue and Taxation Code changes for property tax assessment purposes. The land use restrictions, however, remain the same until the contract expires.

The County prior to the expiration date of the contract shall not approve applications for converting the use of the land to uses that do not comply with the restrictions of the contract. A notice of nonrenewal filed by the County or a property owner with respect to land subject to an existing contract or a contract entered into pursuant to these rules may be withdrawn only upon the consent of the County and the issuance of a new contract in accordance with these rules and any additional conditions required by the County. Any request for withdrawal of a notice of nonrenewal shall include an application for a new contract that complies with the rules and procedures in effect at that time.

- B. **Notice of Partial Non-renewal.** Notice of partial non-renewal for lands within a Land Conservation Agreement. If only a portion of the lands within an agreement are non-renewed, the remaining contract lands must conform to the minimum acreage requirements in TABLE ONE of Rule 5. It is the applicant's responsibility to provide accurate legal descriptions of the area to be non-renewed and the area to remain in the contract.
- C. **Rescission of Williamson Act Contract.** In accordance with the Land Conservation Act, the landowner and the County may upon their mutual agreement rescind a contract in order to simultaneously enter into a new Williamson Act contract in order to facilitate a lot line adjustment in accordance with Sections 51254 or 51257.
- D. **Immediate Cancellation of Williamson Act Contract.** In accordance with the Land Conservation Act, a landowner may petition the County for a tentative immediate cancellation of a contract to terminate the contract on all or a portion of the property. The Board of Supervisors may only approve cancellation of the contract under extraordinary circumstances as provided in Section 51282.
1. To cancel a Williamson Act contract, a petition signed by all parties having a legal or equitable interest in the property shall be submitted to the Development Services Department on a form prescribed by that Department with the applicable fees established in Chapter 3 of the Butte County Code. It will be the responsibility of the applicant to provide all necessary supporting documentation and analysis, as required by the Development Services Department, that the required statutory findings can be met (per Section 51282). It is the applicant's responsibility to provide accurate legal descriptions of the area to be cancelled and any area to remain in contract.
 2. The petition for cancellation shall be referred by the Development Services Department to the Department of Conservation and the LCA Committee for review, comments, and recommendation to the Board of Supervisors. The petition shall also be referred to the County Assessor for determination of the cancellation valuation of the subject property.
 3. Any application for immediate cancellation shall require that the Board of Supervisors make either consistency findings per Section 51282. (a) (1) or public interest findings per Section 51282. (a) (2).
 4. Cancellation of a portion of the contract must result in remaining contract parcels that conform to the minimum acreage requirements of TABLE ONE, Rule 5.
 5. Immediate cancellation allowing minor acreage adjustments of no more than one percent (1%) of the contracted land under the applicant's ownership may be permitted to reconcile building encroachments, irregular fence lines and historic uses through lot

line adjustments, subject to review by the LCA Committee and approval by the Board of Supervisors. Such cancellations do not require that the Board make the statutory findings per Section 51282. (a) (1) or Section 51282. (a) (2).

6. The Development Services Department shall submit a report to the Board of Supervisors containing the recommendation of the LCA Committee concerning the cancellation of the contract and the certified statement from the Assessor concerning the cancellation valuation of the land. Upon receipt of the report, the Clerk of the Board shall schedule the matter for public hearing and give notice as provided in Section 24-25.40 of the Butte County Code and in Section 5128. The Board of Supervisors shall render its decision to deny, approve or conditionally approve the petition for cancellation in accordance with the Land Conservation Act.
 - a. Upon approval of a requested cancellation and recordation of a certificate of cancellation of contract, the valuation formula under the Revenue and Taxation Code changes for property tax assessment purposes and the land will be taxed at its current fair market value. In accordance with Section 51203, if either the Department of Conservation or the landowner believes that the current fair market valuations are inaccurate; either party may request formal review from the County Assessor. The procedures for formal review and any recomputation of the cancellation fee are specified in Government Code Section 51203. [SB 1820 effective Jan. 1, 2005].
 - b. Cancellation of a Williamson Act contract is subject to the payment of a cancellation fee equal to 12.5 percent of the cancellation valuation of the property to the Department of Conservation (pursuant to Section 51283) as determined by the County Assessor based upon the current fair market value of the land as though it were free of the contractual restrictions in accordance with Section 51283. Cancellation of a Williamson Act contract also requires the landowner to make a cancellation fee payment to the County of Butte equal to 12.5% of the cancellation valuation of the property (per Section 51283), as authorized by Section 51240.
- E. **Annexation and Contract Termination.** Per Government Code including but not limited to Sections 51235, 51243.5, 51236 and 51256, annexation of land under Williamson Act contract does not terminate the contract. If a city annexes land subject to a Williamson Act contract, the city succeeds to all rights, duties and powers of the county under the contract. The city protest provision of the California Land Conservation Act of 1965 has been eliminated effective January 1, 1991. Unless a city filed a valid protest before January 1, 1991, the city cannot terminate a contract upon annexation of the property to the city. A city protest made prior to January 1, 1991, is valid only if there is a record of the filing of the protest and the protest identifies the specific affected contract and subject parcel.

- F. **Public Acquisition.** Williamson Act contracts become void for land that is acquired by a federal, state or local government agency for necessary public uses and facilities. The California Land Conservation Act of 1965 contains policies and restrictions to avoid public acquisition of lands in agricultural preserves, with special emphasis on restricting acquisition of land subject to Williamson Act contracts or containing prime agricultural land. State and local government agencies are required to refer proposals to acquire land in agricultural preserves to the State Department of Conservation for their review and response prior to acquisition.
- G. **Correction of Errors.** Adjustments of contracted lands allowing removal or addition of acreage may be permitted in order to correct surveying errors and similar defects, including but not limited to errors in the legal description of contracted lands, after review by the LCA Committee and approval by the Board of Supervisors, where substantial evidence in the record indicates that it was not the intent of either the Board of Supervisors or the landowner to include the lands subject to the error or errors in the contract at the time the contract was executed.

RULE 7 DIVISION OF WILLIAMSON ACT LAND

- A. **Division of Land, General.** There shall be no division of land, lot line adjustment, or merger of parcels subject to a Williamson Act contract that would defeat the intent of the Williamson Act to preserve land in agriculture, open space or recreational use. The Butte County Board of Supervisors finds that divisions of land under Williamson Act contract must comply with Government Code Section 66474.4 and shall be allowed only when all of the five conditions in Rule 7.B are fulfilled. While the LCA Committee oversees the Williamson Act, the Butte County Planning Commission is empowered to approve tentative parcel map, tentative subdivision map, waiver of parcel map, and other land use entitlements applications applicable to this section.
- B. **Land Division Procedures.** Applications for division of land subject to a Williamson Act contract shall be processed in the manner prescribed in Chapter 20 of the Butte County Code, except that for all such applications a determination of compatibility with the Williamson Act shall be made per the procedures prescribed in Rule 2. B. A Planning Commission condition of approval will require modification of the existing contract (at the LCA Committee's recommendation) or rescission of the contract in order to simultaneously enter into a new or amended contract conforming to all rules and procedures in effect at that time. A new or amended contract may be required if the division would change parcel boundaries, and parcel legal description(s). Per Rule 2.B, as part of the process of determining the compatibility of the project with the Williamson Act, the Board of Supervisors must make the following findings regarding land divisions on Williamson Act land:

1. The proposed division will not impair the use of the land for the production of food, fiber, livestock or wildlife habitat, as provided in the contract.
2. Each parcel created by the division or lot line adjustment shall conform to minimum acreage under TABLE ONE of Rule 6.
3. The land division or, lot line adjustment conforms to the Butte County General Plan, state laws and all other applicable County Codes and standards.
4. The land division or lot line adjustment is not for the creation of residential development that does not directly support agricultural production on the contracted land.
5. Any parcel merger (Government Code Article 1.5 Merger of Parcels) shall comply with Rule 5. A. 5. c. and with Butte County Code Section 20-180.3.

C. **Lot Line Adjustment and Parcel Merger.** Per County Code Section 20-95.1 (lot line adjustments) and Section 20-180.3. (parcel mergers) the Director of Development Services may approve lot line adjustments and parcel mergers. On a case-by-case basis, the Director or her/his designee shall review all applications for lot line adjustment or parcel merger to determine the compatibility of the proposed action with the Williamson Act and these rules and procedures. The Director shall determine whether a proposed lot line adjustment or parcel merger is substantially compatible and compliant with the Williamson Act and with these rules. The Director's determination shall be reported to the LCA Committee as a recommendation, by memorandum, and agendaized for consideration by the Committee. In cases where the Director of Development Services determines that a compatibility finding is not clear, the Director shall refer the case directly to the LCA Committee. The LCA Committee shall consider the Director's determination and make a recommendation to the Board of Supervisors concerning the compatibility of the proposed lot line adjustment with the Williamson Act.

D. **Transfer of Ownership to Family Member.** Land shall be permitted to be divided into parcels that do not meet the minimum parcel sizes provided in these rules only when such division is for the purpose of transferring ownership from one immediate family member to another in accordance with Section 51230.1, and per Butte County zoning code minimum parcel size. The Board of Supervisors finds that the transfer of one or more of the parcels so created to a person who is not an immediate family member is a breach of the Williamson Act contract. Pursuant to such unlawful transfer a notice of nonrenewal shall be filed for all portions of the land subject to the existing contract. The Board may also pursue other remedies as authorized by law. No residential buildings

shall be erected on parcels that fail to meet the standards for minimum acreage specified in TABLE ONE of Rule 5. An exception for agricultural labor housing shall comply with the provisions of the California Section 51230.2.

RULE 8 CONTRACT MONITORING & ENFORCEMENT

- A. **Enforcement Responsibility.** The Director of the Department of Development Services (DDS) shall enforce the provisions of these rules and the regulations of the Williamson Act, and shall determine the existence of any violations of any resource management plan as approved by the Board of Supervisors. The Director will bring his/her findings to the LCA Committee for review. The LCA Committee shall review these findings and make recommendations to the Board of Supervisors when appropriate. The Board of Supervisors shall consider the recommendations of the LCA Committee in determining any enforcement action.
- B. **Monitoring of Williamson Act Contracts.**
The county shall actively monitor the agricultural preserve program by periodically reviewing the continuing eligibility of properties and checking for contract violations. Methods for identifying and reviewing the continuing eligibility of properties and uses include:
1. The Development Services Department will review and assess referrals (e.g., new property transfers) from the Assessor's Office, Building Department, and other sources for potential contract violations.
 2. With proper notice to the landowner, the Department of Development Services may schedule an inspection of the land under contract to verify compliance at any time.
 3. In the course of its normal operations, the Assessor's Office conducts random field checks of properties for:
 - a. Existing agricultural uses and land capability to determine if they comply with qualification standards.
 - b. Oversight for potential contract violations.
 4. The Williamson Act contract shall provide for a biennial review for compliance with the terms and conditions of a land conservation contract. Such review would be implemented at the discretion of the Director of Development Services, as indicated by the needs of the program. Such review would be implemented when general monitoring (1. and 2. above) indicates a trend in non-compliance. This process may include the submittal of a report from the

contracted property owners to the Department of Development Services. The form, supplied by the Department of Development Services, may include information that demonstrates compliance with compatible land uses and any resource management plan approved by the Board of Supervisors. Failure to comply with a biennial compliance review survey may be considered a breach of contract and the County may file a notice of nonrenewal of the contract or seek other remedies as authorized by law.

- C. **Violation and Enforcement.** A violation of these rules shall be enforced as provided for in this rule and as provided for in the California Land Conservation Act.
- D. **County-Initiated Notice of Nonrenewal.** In addition to other remedies authorized by law, a notice of nonrenewal of a Williamson Act contract may be filed by the Board of Supervisors for land determined to be out of compliance with these rules, as determined by the Board of Supervisors after consideration of the recommendation of the LCA Committee in accordance with this rule.
- E. **Additional Remedies.** The remedies provided for in this rule are cumulative and in addition to any other remedies otherwise authorized by law.

- L1-1 Please refer to Common Response 1, “Opposition to the Proposed Project.”
- L1-2 Please refer to Common Response 2, “Adequacy of CEQA Public Noticing.”
- L1-3 Please refer to Common Response 1, “Opposition to the Proposed Project,” and Common Response 4, “Impacts to Agricultural Operations,”
- L1-4 Please refer to Common Response 3, “Adequacy of CEQA Document.”
- L1-5 The project is proposed by, and would be implemented by, State Parks. State agencies are not subject to local or county land-use plans, policies, and zoning regulations (Hall vs. City of Taft [1952] 47 Cal.2d 177; Town of Atherton v. Superior Court [1958] 159 Cal.App.2d 417; Regents of the University of California v. City of Santa Monica [1978] 77 Cal. App.3d 130).
- Under CEQA, an EIR must consider the extent to which a project is inconsistent with “applicable general plans” (State CEQA Guidelines Section 15125, subd. [d]; see also State CEQA Guidelines Appendix G, IX[b]). In this case, because State Parks is a State agency that is not subject to local land-use regulations, land-use plans, policies and regulations adopted by Butte County are not applicable to the project. For this reason, this EIR need not, as a matter of law, consider such plans, policies, and regulations.
- Nevertheless, in the exercise of its discretion, State Parks does reference, describe, and address local land-use plans, policies, and regulations that are applicable to the project. State Parks takes this approach because it is recognized that such plans, policies, and regulations reflect the local community’s policy decisions with respect to appropriate uses of land in the area. Consideration of these plans, policies and regulations therefore assists State Parks in determining whether the proposed project may conflict with nearby land uses that could result in potentially significant environmental impacts.
- Please refer to the following sections of the EIR, which discuss local policies/regulations that are applicable to the project:
- ▶ Section 4.1, Noise: discussion of the Butte County General Plan Noise Element, noise standards, and noise control requirements;
 - ▶ Section 4.2, Agricultural Resources (as revised in this Final EIR): discussion of Butte County General Plan Agricultural Element, Butte County Williamson Act Procedures (County Resolution No. 07-021), Butte County Right to Farm Ordinance, Chico Area Greenline and Butte County Crop reports.
 - ▶ Section 4.3, Hydrology, Water Quality, and Geomorphology: discussion of Memorandum of Agreement between Butte County and the Central Valley Flood Protection Board regarding floodplain jurisdiction in the project area;
 - ▶ Section 4.6, Air Quality: analysis conducted in accordance with Butte County Air Quality Management District’s guidelines and consultation.

- L1-6 Please refer to Common Response 1, “Opposition to the Proposed Project,” and Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L1-7 Please refer to Common Response 8, “Safety of Facilities During Flood Events.”
- L1-8 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-9 Please refer to “Fire Protection” in Section 3.4.2 of this EIR, which states:

“Wildland fire protection in California is the responsibility of either the State, local government, or the federal government. The project site, neighboring agricultural lands and BSRSP are located within a Local Responsibility Area (LRA). Local Responsibility Areas include incorporated cities, cultivated agriculture lands, and portions of the desert. Fire protection in LRAs is typically provided by city fire departments, fire protection districts, counties, and by the California Department of Forestry and Fire Protection (CAL FIRE) under contract to local government” (CAL FIRE 2007).

Fire hazard in the LRA is evaluated by CAL FIRE. California law requires CAL FIRE to identify areas based on the severity of fire hazard that is expected to prevail there. These “zones” are based on factors such as fuel (material that can burn), slope and fire weather. There are three zones, based on increasing fire hazard: medium, high and very high. CAL FIRE uses an extension of the State Responsibility Area Fire Hazard Severity Zone model as the basis for evaluating fire hazard in the LRA. The model evaluates property using characteristics that affect the probability of the area burning and potential fire behavior in the area. Many factors are considered such as fire history, existing and potential fuel, flame length, blowing embers, terrain, weather and likelihood of buildings igniting. The LRA hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area (CAL FIRE 2007). The project site is designated as a “non-wildland fuels (e.g., rock, agriculture, water)” fire hazard zone. The neighboring BSRSP lands are designated as a “moderate” fire hazard zone (CAL FIRE 2006).

Butte County is statutorily responsible for fire, life and safety incidents at the project site due to its location in the Local Responsibility Area. The Butte County Fire Department contracts with the California Department of Forestry and Fire Protection (CAL FIRE) to administer fire prevention and suppression in Butte County. The program includes full-time firefighters as well as a capably-trained contingent of volunteers who respond to every type of emergency. The closest fire station to the project site, and the first due engine, through an automatic aid agreement between Butte County and the City of Chico, would be Chico Station 6 located at 2544 State Route 32. For multiple engine responses, County Stations 41 (13871 Hwy 99, Chico), 42 (10 Frontier Circle, Chico), and 44 (2334 Fair Street, Chico) would respond. Response times from these stations are as follows:

- ▶ Chico Station 6: approximately 6 minutes 15 seconds
- ▶ County Station 41: approximately 9 minutes 11 seconds
- ▶ County Station 42: approximately 12 minutes 6 seconds
- ▶ County Station 44: approximately 14 minutes 41 seconds

Historic data for the past three (3) years indicates there have been approximately 45 calls over the three-year period in the Scotty’s Boat Landing and Hwy 32/River Road area.

Implementation of Park Plan Goal AO-2.3 and Guidelines AO-2.3.1 and AO-2.3.2 would facilitate monitoring and patrolling of the Park, which would provide the opportunity to

respond to potential causes of wildfire (e.g., illegal fires). In addition, Park Plan Guideline AO-3.3-2 would restrict the use of campfires, further minimizing potential wildfire ignition, and Park Plan Guideline VU-3.7-4 would ensure the provision of information to visitors on Park rules regarding fire safety. Given these goals and guidelines, the increase in the risk of wildland fire is not expected to be substantial. Further, all facilities would be designed in compliance with the California Building Code, which requires fire safety features.”

Please also refer to “Law Enforcement” in Section 3.4.2 of the EIR, which states:

“Law enforcement services are provided concurrently by State Parks, California Highway Patrol and local law enforcement agencies, namely Butte County Sheriff Department for the portion of BSRSP in Butte County. Public safety and emergency services are the primary responsibility of the State Park Peace Officers who are California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These Peace Officers patrol State Parks and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. Additionally, consistent with the Park Plan Goal AO-4.4, State Parks will work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area.”

L1-10 The recreation facilities in the proposed project would become part of BSRSP and the facilities would be managed in accordance with BSRSP management goals and guidelines, which are discussed in detail in Section 3.2, “Park-wide Management Goals and Guidelines,” of the Park Plan, from which this EIR is tiered. Park-wide management goals and guidelines, which are applicable to the entire Park regardless of subunit purpose and/or location, are management approaches for achieving the Declaration of Purpose and Vision Statement (see Section 3.1 of the Park Plan).

The goals and guidelines for BSRSP are organized into three main categories: (1) environmental resource management, (2) visitor use and opportunities, and (3) administration and operations. These components must be integrated with one another for successful implementation of the Park Plan. Please refer to Section 3.2 of the Park Plan for the complete list of goals/guidelines.

L1-11 Please refer to Common Response 2, “Adequacy of CEQA Public Noticing.”

L1-12 The existing noise environment at the Singh Unit and Nicolaus property is defined by active agricultural operations at the onsite orchards, which generate noise associated with farming activities (vehicles, farm equipment, people working, etc.), as well as neighboring agricultural operations, local roadway traffic on River Road, and recreational activities associated with Bidwell-Sacramento River State Park. The noise analysis prepared for the project (see Section 4.1.2 of the EIR) was conducted with respect to the Butte County General Plan Noise Element, with consideration given to the Findings, Policies, and Implementation section, although the State is not bound by the local laws. The County does not have a noise ordinance and Butte County Code contains no noise standards. Additionally, the policies outlined in the Noise Element do not identify quantifiable noise criteria. As such, noise exposure due to the project, and surrounding noise that may affect the project, were evaluated against the land use compatibility standards presented in Chart NO-4 of the Butte County General Plan Noise Element. As presented in Section 4.1.2 of the EIR, in accordance with Park Plan Guideline AO-3.3-3, State Parks would advise its contractors to meet Butte County’s noise control requirements for construction activity. Noise control measures, as provided by Butte County Planning Department staff, are provided in the EIR. As for long-term stationary-source noise, the noise levels generated at the campgrounds, headquarters, and day use area would be approximately 52–56 dBA L_{dn} , from a distance of 50

feet. Noise levels would further attenuate the farther away the sensitive receptor. Therefore, as explained in Section 4.1.2 of the EIR, the resultant noise level would likely be less than the ambient noise level at the nearest sensitive receptor, and would not exceed the “normally acceptable” standard of 60 dBA L_{dn} . As shown in Table 4.1-2 of the EIR, project-generated traffic would result in a traffic noise level of approximately 55 dBA L_{dn} along River Road, which would not exceed Butte County’s 60 dBA L_{dn} standard at any noise-sensitive receptors. It should also be noted that, in response to comments on the Draft EIR, the RV campsites have been removed from the Recreation Facilities plans, which would further reduce project-generated stationary-source noise and operational traffic noise.

Please also refer to “Law Enforcement” in Section 3.4.2 of the EIR. Public safety and emergency services are the primary responsibility of the State Park Peace Officers who are California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These Peace Officers patrol State Parks and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. Additionally, consistent with the Park Plan Goal AO-4.4, State Parks will work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area. Furthermore, the hours of operation for the day use area (located on River Road across from a residence) would be restricted from sunset to sunrise and the entry/exit to the area would be gated.

- L1-13 Please refer to response to Comment L1-9.
- L1-14 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-15 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-16 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-17 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and Common Response 7, “Buffer Zones.”
- L1-18 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-19 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-20 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-21 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-22 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-23 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-24 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-25 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-26 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-27 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-28 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and Common Response 5, “Impacts to Lands Under Williamson Act Contract.”

- L1-29 Please refer to Common Response 5, “Impacts to Lands Under Williamson Act Contract.”
- L1-30 Please refer to Common Response 8, “Safety of Facilities During Flood Events.”
- L1-31 Please refer to Common Response 8, “Safety of Facilities During Flood Events.”
- L1-32 Please refer to Common Response 8, “Safety of Facilities During Flood Events.”
- L1-33 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L1-34 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L1-35 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L1-36 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L1-37 The existing BSRSP subunits are geographically separated. The proposed project would provide greater connectivity via new trails connecting the Nicolaus property to the Indian Fishery Subunit and the Singh Unit to the Big Chico Creek Riparian Area as illustrated in Exhibit 3-9 of the EIR and Exhibit 3-1 of the Park Plan, from which this EIR is tiered. As addressed in Section 4.1, “Transportation and Traffic,” of the EIR, the project would result in a less-than-significant impact related to traffic and circulation. Because River Road is under the jurisdiction of Butte County, any changes to River Road, such as the addition of bicycle lanes, would be made at the discretion of the County.
- L1-38 The Recreation Facilities Plan for the project has been revised, as shown in Appendix D of this EIR, to remove RV campgrounds from the proposed project. Because the project would no longer provide RV campgrounds, it is assumed that the project would not result in a significant increase in RVs traveling on River Road.
- L1-39 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-40 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-41 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-42 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-43 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and Common Response 5, “Impacts to Lands Under Williamson Act Contract.”
- L1-44 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-45 Please refer to Common Response 3, “Adequacy of CEQA Document.”
- L1-46 Please refer to Common Response 8, “Safety of Facilities During Flood Events.”
- L1-47 The text in Section 3.4.2, “Public Access and Recreation Facilities,” Section 4.1, “Utilities and Public Services,” and Impact 4.3-e, “Change in Water Demand and Available Water Supply,” of the EIR has been edited to reflect the following:
- The Singh Unit has one groundwater well with a current capacity of approximately 500 gallons per minute (Luster 2007). There are five groundwater wells on the Nicolaus property. Four of the

wells are intended for agricultural use; however, only one of the agricultural wells (located in the north-central part of the property) is used to water the entire orchard. This well has a current capacity of approximately 1,800-2,000 gallons per minute (Luster 2007). The other three agricultural wells are drilled and cased and could be functional, although they do not currently have pumps or motors. The fifth well is the existing domestic water source, with a capacity of approximately 25 gallons per minute, which is located adjacent to the existing farm house. This domestic water well would continue to be used to provide potable water to the BSRSP headquarters (relocated to be in the farm buildings) and the recreational facilities on the Nicolaus property. An onsite water treatment facility would be installed to maintain acceptable water quality levels from this domestic groundwater well as regulated by the State Division of Drinking Water.

L1-48 As described in Section 4.1 of the EIR, no hazardous materials are stored on the Singh Unit. However, there are four above-ground storage tanks on the Nicolaus property: one 500-gallon diesel above-ground storage tank, one 500-gallon gas above-ground storage tank, one 1000-gallon waste oil above-ground storage tank, and one 1000-gallon diesel above-ground storage tank. All four of these storage tanks would be removed and disposed in accordance with all state and federal rules and regulations as part of the proposed project. There is also an existing chemical storage shed on the Nicolaus property, in the farm complex, that is on a concrete slab and contains hazardous materials (Round Up, fertilizers, Abound, Goal, malathion, Dipel, rodenticide, Kocide, and Manex).

The proposed project would not involve activities that could generate hazardous emissions, but small quantities of hazardous materials such as propane, pesticides, fertilizers, and herbicides would be stored in the storage shed in the farm complex (the relocated Park headquarters) and occasionally used on the project site. However, replacing the existing agriculture land use with restored riparian habitat would result in a decrease in pesticide and herbicide applications. All transport, storage, and use of hazardous materials would be conducted in accordance with all state and federal rules and regulations.

Because the project would not involve the storage or handling of hazardous materials in quantities equal to, or greater than, 500 pounds, 55 gallons, or 200 cubic feet at standard temperature and pressure (for compressed gas), the project would not require the preparation of a Hazardous Materials Release Response Plan. If such quantities of hazardous materials are to be stored or handled at the project site in the future, State Parks would prepare and submit a Hazardous Materials Release Response Plan to Butte County Environmental Health.

L1-49 Please refer to response to Comment L1-9.

L1-50 Recreational and camping activities encroaching on noise-sensitive land uses (i.e., residential) can exhibit a potential to elevate noise levels in the immediate vicinity. As described in Section 4.1.2 of the EIR, the predominant noise source associated with recreational and camping activities would be generated by parking activities. Methodologies used to calculate noise levels generated by parking activities account for vehicle arrival, limited idling, occupants exiting the vehicle, door closures, conversations among passengers, occupants entering the vehicle, startup, and departure of the vehicle. Parking activities associated with the project would be less than 56 dB L_{dn} , 50 feet from the acoustical center of activity. The center of parking activities on the Nicolaus property would be more than 1,500 feet from the residential land use to the north. Stationary noise sources (i.e., parking lot activities, generators, and construction noise) generally attenuate at a rate of 6 dB to 7.5 dB per doubling of distance. Assuming an attenuation rate of 6 dB per doubling of distance, recreational and campground parking lot noise levels would be reduced to less than 35 dB L_{dn} at the residence north of the Nicolaus parcel. Thus, the resultant noise level

would likely be less than the existing ambient noise level at this receptor and not exceed the “normally acceptable” standard of 60 dBA L_{dn} established by Butte County General Plan Noise Element for low-density residential land uses. As a result, parking activity noise would be less than significant. Further, in response to comments on the Draft EIR, the RV campgrounds were removed from the recreation facilities plans (Appendix D). The EIR analysis of parking noise included RV parking spaces and is, therefore, very conservative. With removal of the RV campground, the parking noise would be further reduced.

Noise levels generated by human speech are typically not feasible to address due to the intermittent and highly variable nature. Human speech levels range from 50 dB to 70 dB at a distance of three feet, with typical speech patterns limiting sound generation to less than 50 percent of the conversation period. However, assuming elevated levels of 70 dB were being produced for the duration of an hour, noise levels generated by constant human speech would be 46 dB L_{eq} at a distance of 50 feet. Assuming an attenuation rate of 6 dB per doubling of distance, noise levels attributed to human speech would attenuate to less than 16 dB L_{eq} at a distance of 1,500 feet. Should sustained levels occur for the duration of a 24-hour period, noise levels attributed to human speech generated by recreation and camping activities on the Nicolaus parcel would not exceed 25 dB L_{dn} at the neighboring residence. This noise level would likely be less than the existing ambient noise level at this receptor, would not exceed the “normally acceptable” standard of 60 dBA L_{dn} established by Butte County General Plan Noise Element for low-density residential land uses, and this impact would be less than significant.

These predictions do not account for shielding provided by intervening topography, dense vegetative habitats, atmospheric absorption, or source directionality. As a result of such shielding, noise levels could be reduced by an additional 3 dB to 10 dB.

Please also refer to Common Response 4, “Impacts to Agricultural Operations.”

L1-51 Please refer to response to Comment L1-9.

L1-52 Section 3.4.2, “Fire Protection,” of the EIR has been edited as follows:

“Wildland fire protection in California is the responsibility of either the State, local government, or the federal government. The project site, neighboring agricultural lands and BSRSP are located within a Local Responsibility Area (LRA). Local Responsibility Areas include incorporated cities, cultivated agriculture lands, and portions of the desert. Fire protection in LRAs is typically provided by city fire departments, fire protection districts, counties, and by the California Department of Forestry and Fire Protection (CAL FIRE) under contract to local government (CAL FIRE 2007).”

Fire hazard in the LRA is evaluated by CAL FIRE. California law requires CAL FIRE to identify areas based on the severity of fire hazard that is expected to prevail there. These “zones” are based on factors such as fuel (material that can burn), slope and fire weather. There are three zones, based on increasing fire hazard: medium, high and very high. CAL FIRE uses an extension of the State Responsibility Area Fire Hazard Severity Zone model as the basis for evaluating fire hazard in the LRA. The model evaluates property using characteristics that affect the probability of the area burning and potential fire behavior in the area. Many factors are considered such as fire history, existing and potential fuel, flame length, blowing embers, terrain, weather and likelihood of buildings igniting. The LRA hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area (CAL FIRE 2007). The project site is designated as a “non-wildland fuels (e.g., rock, agriculture, water)” fire

hazard zone. The neighboring BSRSP lands are designated as a “moderate” fire hazard zone (CAL FIRE 2006).

Butte County is statutorily responsible for fire, life and safety incidents at the project site due to its location in the Local Responsibility Area. The Butte County Fire Department contracts with the California Department of Forestry and Fire Protection (CAL FIRE) to administer fire prevention and suppression in Butte County. The program includes full-time firefighters as well as a capably-trained contingent of volunteers who respond to every type of emergency. ~~The CDF Butte County Unit, Station #43 is located in west Chico at 2544 SR 32 and would likely be the first to respond to a call for fire prevention or protection at the project site. The closest fire station to the project site, and the first due engine, through an automatic aid agreement between Butte County and the City of Chico,~~ would be Chico Station 6 located at 2544 State Route 32. For multiple engine responses, County Stations 41 (13871 Hwy 99, Chico), 42 (10 Frontier Circle, Chico), and 44 (2334 Fair Street, Chico) would respond. Response times from these stations are as follows:

- ▶ Chico Station 6: approximately 6 minutes 15 seconds
- ▶ County Station 41: approximately 9 minutes 11 seconds
- ▶ County Station 42: approximately 12 minutes 6 seconds
- ▶ County Station 44: approximately 14 minutes 41 seconds

Historic data for the past three (3) years indicates there have been approximately 45 calls over the three-year period in the Scotty’s Boat Landing and Hwy 32/River Road area.”

Implementation of Park Plan Goal AO-2.3 and Guidelines AO-2.3.1 and AO-2.3.2 would facilitate monitoring and patrolling of the Park, which would provide the opportunity to respond to potential causes of wildfire (e.g., illegal fires). In addition, Park Plan Guideline AO-3.3-2 would restrict the use of campfires, further minimizing potential wildfire ignition, and Park Plan Guideline VU-3.7-4 would ensure the provision of information to visitors on Park rules regarding fire safety. Given these goals and guidelines, the increase in the risk of wildland fire is not expected to be substantial. Further, all facilities would be designed in compliance with the California Building Code, which requires fire safety features.”

L1-53 As discussed in Section 4.1 of the EIR, introducing new recreational facilities on the project site would increase the risk of wildland fires. In addition, riparian habitat restoration could increase the fuel load on the project site. Increased fuel load and increased recreational facilities that increase human activity, including campfires, would result in an increased risk for wildfires. The project site’s designation by CAL FIRE would change from a “non-wildland fuels (e.g., rock, agriculture, water)” fire hazard zone to a “moderate” fire hazard zone. Campfires would be allowed in designated areas within the proposed campgrounds on the Nicolaus property, consistent with Park Plan Guideline AO-2.3-2. Additionally, Park Plan Goal AO-2.3 and Guidelines AO-2.3-1 and 2.3-2 facilitate monitoring and patrolling of BSRSP, which would provide the opportunity to control and respond to potential illegal fires. Park Plan Guideline VU-3.7-4 would also be implemented to ensure Park visitors are provided information regarding fire safety. BSRSP also has an existing Wildfire Management Plan that addresses wildfire threats within the Park and the project would operate in compliance with this Plan. It is also worthy to note that State Parks has not had a wildfire result from a campfire at a Park (Tobias 2008).

L1-54 State Parks shall ensure that the access roads for the proposed project conform to the Fire Department’s emergency access requirements. To minimize development and provide for habitat

restoration, State Parks would prefer to keep the single access road. It should also be noted that the RV campground has been removed from the project plans.

- L1-55 State Park Peace Officers are trained in the use of Automated Electronic Defibrillators (AEDs). AEDs will be kept with the trained Peace Officers.
- L1-56 The proposed project is located east of River Road, which runs in a north-south direction between the project site and the Sacramento River. The proposed project would not involve actions to the west of River Road beyond removal of the existing BSRSP headquarters facilities/equipment from the day use area on River Road. Therefore, no road access would be provided by this project to the Sacramento River. Per the BSRSP General Plan, State Parks may provide additional trail access to the river in the future, but has no plans for new road access to the river in this area.
- L1-57 Please refer to Common Response 3, “Adequacy of CEQA Document.”
- L1-58 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L1-59 Section 4.3 of the EIR addresses hydrology, water quality, and river geomorphology in the project area and the potential effects of the proposed project. As explained in Impact 4.3-b, increasing vegetation densities (habitat restoration) and changing land cover types (recreation facility development) on the floodplain would alter water velocities in the existing floodway of the project area, possibly changing sediment transport, channel scouring, and meander migration. However, per the revised Flood Neutral Hydraulic Analysis provided in Appendix B of this EIR, any potential changes in velocities would be too small to substantially affect channel hydraulics or lead to erosive forces that could affect this already dynamic system. The largest change in velocity (approximate increase of 2.0 feet per second) would be within the swale proposed in the western portion of the Singh Unit (in a north-south alignment), which would convert orchard to meadow. Other small increases to water velocity (approximately 0.25 – 1.0 feet per second) would be related to the meadow buffers along the northwestern corner and portions of the eastern boundary of the Singh Unit and the southwestern corner of the Nicolaus property, as well as within the oak savannah habitat and small portions of the recreation facilities on the Nicolaus property. Additionally, the Flood Neutral Hydraulic Analysis shows decreases in water velocity (approximately 0.25 feet per second) along River Road at the western boundary with the Singh Unit. These minor changes would not be expected to substantially alter sediment transport and deposition within the project area. Therefore, the project is not anticipated to cause roadway erosion that does not currently exist. Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis,” for further information.
- L1-60 Please refer to “Transportation and Traffic” in Section 4.1 of the EIR. The existing average daily traffic volume on River Road, which provides access to the project site, is approximately 1,241 vehicles (Butte County Public Works Engineering Division 2002). The proposed project would increase recreational facilities in BSRSP and may attract additional visitation, which would increase vehicular trips along local roadways serving the Park. Based on trip generate rates (used to prepare the air quality analysis, see Appendix E), the new campgrounds, park headquarters and day use facilities would generate a maximum of 678 additional vehicle trips per day during peak season. The daily traffic volume on River Road would increase to approximately 1,919 vehicles. Most of the vehicle trips along local roadways would occur during weekends, particularly holiday weekends, and very few of the trips are expected during the peak commuter hours when LOS levels are of greatest concern. Park Plan Goal VU-3.2 and Guidelines VU-3.2-1 and 3.2-2 also facilitate the provision of public transportation to the Park. Furthermore, Goal AO-2.3 would facilitate coordination with Caltrans. Consistent with the Park Plan analysis of Impact TRANS, the proposed project would result in a less-than-significant impact related to traffic and

circulation. The project effects on traffic and circulation have been adequately covered in the Park Plan. No further analysis is required and no mitigation measures are imposed.

Additionally, it should be noted that vehicle trips would be further reduced because, in response to comments on the Draft EIR, the RV campground has been removed from the recreation facilities plans. Therefore, the increase to traffic volume on River Road would be reduced. Because the removal of RV campgrounds would further reduce the project effects on traffic and circulation, this impact remains less than significant and no mitigation or further analysis is required.

L1-61 There is existing river access within BSRSP as described in Table 3-1 of the EIR. There are boat launches within the Irvine Finch River Access Subunit and the Pine Creek Landing Subunit that facilitate motor boating, kayaking, canoeing, tubing, and fishing. In addition, there is a small boat launch and day use area located in the Big Chico Creek Subunit of BSRSP, south of the project site, which facilitates kayaking, canoeing and fishing. The proposed trails on the Singh Unit would connect to trails within Big Chico Creek Subunit, which lead to the boat launch area.

L1-62 The boundaries between the project site, which would be part of State Park's BSRSP, and private property would be clearly posted, consistent with Guideline AO-1.1-2 and AO-4.4-1 of the Park Plan. The northern boundary of the Singh Unit and the four corners (NW, NE, SW, SE) of Nicolaus property have been surveyed and marked (April 2008). The survey plat has been recorded with Butte County. State Parks would post "Park Boundary" signs as well as "No Trespass" signs along the project site boundaries with private lands. State Parks plans on locking the gate at the proposed day use area (located at the current site of the BSRSP headquarters on River Road) from sunset to sunrise. Additionally, State Parks will consider additional measures to prevent trespass such as appropriate fencing or natural barriers, subject to regulatory approval.

Please refer to "Law Enforcement" in Section 3.4.2 of the EIR. Public safety and emergency services are the primary responsibility of the State Park Peace Officers who are California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These Peace Officers patrol State Parks and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. Additionally, consistent with the Park Plan Goal AO-4.4, State Parks will work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area.

Please also refer to Common Response 4, "Impacts to Agricultural Operations."

L1-63 Please refer to Common Response 8, "Safety of Facilities During Flood Events."

L1-64 Please refer to Common Response 4, "Impacts to Agricultural Operations."

L1-65 Please refer to Common Response 4, "Impacts to Agricultural Operations."

L1-66 Please refer to Common Response 4, "Impacts to Agricultural Operations."

L1-67 The possible closure of Woodson Bridge State Recreation Area (SRA) is in no way related to the proposed BSRSP Habitat Restoration and Recreation Facilities Development Project. The Woodson Bridge SRA is proposed for temporary closure due to State budget cuts, which affect State Parks' general fund. Whether or not Woodson Bridge SRA is closed will depend on the fiscal allowances to State Parks in the final State budget.

Funding for the planning and environmental review (CEQA process) of the proposed BSRSP Habitat Restoration and Recreation Facilities Development Project is not dependent upon the

State budget or State Parks' general fund. The planning and environmental review is funded by a CALFED Ecosystem Restoration Program (CALFED ERP Program) grant (ERP-02-P16D) (see Section 1.4 of the Draft EIR). The mission of the CALFED ERP Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the San Francisco Bay/Sacramento-San Joaquin Delta.

The CALFED ERP grant does not provide funding for implementation of the BSRSP Habitat Restoration and Recreation Facilities Development Project. Therefore, implementation of the proposed project will be dependent upon future funding, which could be in the form of grants or other sources of funding. It is not known at this time when funding will be available for project implementation or what the funding source will be. Once the project is constructed, operations and maintenance of the restored habitat and recreation facilities would be subject to State Parks operating funds.

- L1-68 Please refer to Common Response 3, "Adequacy of CEQA Document."
- L1-69 This Final EIR and responses to comments on the Draft EIR, as well as any future notices for this project, will be sent to the Butte County Board of Supervisors as well as all of the Butte County contacts listed in Common Response 2, "Adequacy of CEQA Public Noticing."
- L1-70 State Parks will continue to coordinate with Butte County to address the County's concerns as feasible.
Please refer to Common Response 2, "Adequacy of CEQA Public Noticing."
- L1-71 Please refer to Common Response 3, "Adequacy of CEQA Document," and Common Response 4, "Impacts to Agricultural Operations."
- L1-72 Please refer to Common Response 6, "Revised Flood Neutral Hydraulic Analysis."
- L1-73 Please refer to response to Comment L1-59.
- L1-74 Please refer to response to Comment L1-60.
- L1-75 Please refer to response to Comment L1-61.
- L1-76 Please refer to response to Comment L1-9.
- L1-77 Please refer to response to Comment L1-62.
- L1-78 Please refer to Common Response 8, "Safety of Facilities During Flood Events."
- L1-79 Please refer to Common Response 7, "Buffer Zones," and Common Response 4, "Impacts to Agricultural Operations."
- L1-80 Please refer to Common Response 4, "Impacts to Agricultural Operations," and Common Response 5, "Impacts to Lands Under Williamson Act Contract."
- L1-81 Most campgrounds in State Parks do not generate enough revenue to pay for operation and maintenance of the campground. Public safety and emergency services are the primary responsibility of the State Park Peace Officers serving the Park. Please also refer to responses to Comments L1-12, L1-50, L1-52, L1-53, L1-54, L1-55, L1-60 and L1-62, which address concerns regarding noise, fire protection, emergency access, traffic, and law enforcement.

L1-82 Please refer to Common Response 4, “Impacts to Agricultural Operations.”

L1-83 As explained in Section 4.2, “Socioeconomic Considerations,” of this EIR, the CEQA Guidelines provide that “economic or social information may be included in an EIR or may be presented in whatever form the agency desires” but that “economic or social effects of a project shall not be treated as significant effects on the environment” (CEQA Guidelines Section 15131). Therefore, although social and economic consequences are not in of themselves environmental impacts under CEQA, Section 4.2 discusses socioeconomic considerations related to agricultural production resulting from implementation of the proposed project.

Combined, the Singh Unit and Nicolaus property represent a total of 189 acres of designated Irrigated Farmland (see Section 4.2.1 of the EIR). Of this amount, a total of 170 acres are currently planted in walnuts and almonds. If this total acreage was removed from production for native vegetation restoration or rural outdoor recreation uses, it would constitute a very small portion of total agricultural lands in walnut and almond production in Butte County (approximately 0.2% of Butte County’s almond and walnut orchards and approximately 0.04% of land in agricultural production). Reducing agricultural production value by this proportion would have a minor, if not unnoticeable, economic effect in the county. The cessation of agricultural production can also cause an indirect economic ripple effect on secondary service and supply businesses supporting agriculture. However, because of the small relative contribution of the project site to agricultural production in the county, the combined direct and indirect economic effect of removing agricultural production from these lands would be minor.

L1-84 Please refer to Common Response 1, “Opposition to the Proposed Project.”

L1-85 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”

L1-86 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”

L1-87 Please refer to Common Response 7, “Buffer Zones.”

The proposed day use area, located west of River Road and across from the residence north of the Nicolaus parcel, would replace the existing BSRSP headquarters and day use area. In response to comments on the Draft EIR, the revised Conceptual Public Access and Recreation Plan (see Appendix D of this EIR) now includes only one point of entry/exit off of River Road, which is off-set from the driveway to the residence across River Road. In addition, vegetation would be planted along River Road to provide a vegetative buffer between the day use area and the road. Use of the day use area is not expected to substantially increase in comparison to the existing use, because the BSRSP headquarters offices will be moved from that site to the farm complex on the Nicolaus property and the parking capacity would not substantially increase. Furthermore, the hours of operation for the day use area would be restricted from sunset to sunrise and the entry/exit to the area would be gated.

L1-88 The proposed day use area, located west of River Road and across from the residence north of the Nicolaus parcel, would replace the existing BSRSP headquarters and day use area. This day use area would have capacity to accommodate five oversized vehicles (i.e., RV, Bus) and 12 regular passenger vehicles. For the proposed project to cause a significant noise increase, capacity at the day use area would need to double. However, parking capacity at the proposed day use facility would not substantially increase capacity in comparison to existing headquarters and day use area, and therefore would not significantly increase noise levels associated with the day use area. Based on the methodology outlined in Section 4.1.2 of the EIR, the proposed day use area would generate an average daily noise level of 52.4 dB L_{dn} , which would not exceed the “normally acceptable” standard of 60 dBA L_{dn} . Additionally, the project would include changing the

entry/exit to this day use area to a single point of access off of River Road, a gate at that entry point, vegetative screening along River Road, and limiting the hours of operation for the park from sunrise to sunset.

- L1-89 Please refer to response to Comment L1-67.
- L1-90 Please refer to Common Response 3, “Adequacy of CEQA Document,” and please refer to Section 4.2 of this EIR, “Socioeconomic Considerations.”
- L1-91 Please refer to responses to Comments L3-1 through L3-20.
- L1-92 Please refer to Common Response 2, “Adequacy of CEQA Public Noticing.” In addition, please refer to Appendix A of the EIR for a summary of scoping comments and responses.
- L1-93 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L1-94 Please refer to Common Response 2, “Adequacy of CEQA Public Noticing.”
- L1-95 Please refer to Common Response 5, “Impacts to Lands Under Williamson Act Contract.”
- L1-96 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L1-97 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and Common Response 5, “Impacts to Lands Under Williamson Act Contract.”



**BUTTE
COUNTY
FARM BUREAU**

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March 17, 2008

Mrs. Denise Reichenberg
Sector Superintendent
California Department of Parks and Recreation
Northern Buttes District/Valley Sector
525 Esplanade
Chico, California 95926

**Re: California Department of Parks and Recreation, Draft Environmental
Impact Report, Bidwell-Sacramento River State Park: Habitat Restoration
and Outdoor Recreation Facilities Development Project**

Dear Mrs. Reichenberg,

The Butte County Farm Bureau ("BCFB") is a member of the California Farm Bureau Federation representing approximately 2200 members throughout Butte County. The California Farm Bureau Federation ("Farm Bureau") is a non-governmental, non-profit, voluntary membership California corporation whose purpose is to protect and promote agricultural interests throughout the State of California and to find solutions to the problems of the farm, the farm home and the rural community. Farm Bureau is California's largest farm organization, comprised of 53 county Farm Bureaus currently representing approximately 91,000 members in 56 counties. Farm Bureau strives to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of California's resources.

L2-1

BCFB appreciates the opportunity to provide comments on the proposed Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project ("Project") draft environmental impact report ("DEIR"). These comments supplement our previous CEQA Scoping Comments submitted on September 25, 2007. BCFB continues to be very concerned with several aspects of the proposed Project, including, but not limited to the Project's compatibility with agricultural operations and with the adequacy of the DEIR.

1. Inadequate DEIR

The DEIR fails to adequately evaluate and analyze many direct and indirect impacts resulting from the proposed Project. In particular, the DEIR disregards public safety concerns and fails to minimize flooding impacts. The proposed area sits in a flood zone that is subject to yearly seasonal floods. Additionally, although the DEIR acknowledges possible public safety issues resulting from the Project, mitigation

L2-2

measures, including a 24-hour call in line to report concerns, do not adequately protect the public. Butte County Sheriff and Fire would be responsible for responding and the number of public safety staff is already limited in our community. Further, the DEIR demonstrates a lack of understanding regarding the proposed Project's impacts to surrounding agriculture and fails to propose any mitigation measures to account for the significant change in land use.

L2-3

2. Viability of Surrounding Agriculture

The proposed Project would permanently remove existing prime agricultural land from future use. Even though the Project does not propose urban development, the proposed recreational facility will result in the loss of farmland, a valuable resource to the State of California. Additionally, the Project's land use change will have reasonably significant adverse impacts, including direct, indirect, and secondary effects, on the surrounding physical environment. As stated in Appendix G of the CEQA Guidelines, the Project *will* result in significant impacts to agricultural resources since it will:

L2-4

- Convert prime farmland to non-agricultural uses;
- Conflict with existing zoning for agricultural uses, including the current Williamson Act contract; and
- Involve changes to the existing environment that will result in the conversion of important farmland to non-agricultural uses.

L2-5

L2-6

Additionally, neighboring landowners would be negatively impacted. Surrounding agricultural lands may be prohibited from pesticide application and spraying, harvesting, and using standard equipment at certain times and may be subjected to illegal trespassing on private property by campers who think they can pick fresh almonds and walnuts. Posted signs and a call-in line without any patrol are not effective means to prevent trespass and interference. The DEIR's brief conclusions that the Project's impacts to agricultural resources are less than significant are insufficient, inadequate, and fail to thoroughly examine all direct, indirect, and secondary effects. The DEIR also fails to provide any mitigation measures for these significant impacts to agricultural resources. CEQA requires mitigation where feasible for significant effects on the environment.

L2-7

L2-8

The location of the proposed Project will create a negative impact to the economic viability of the surrounding agricultural properties, in addition to permanently converting prime agricultural land on the Project site. Converting prime agricultural land currently in orchard production and turning it into an outdoor recreation facilities development with public recreation facilities, day use areas, picnic areas, campgrounds, RV grounds, parking areas, and restrooms is a substantial land use change. A permanent conversion of agricultural resources includes a change that would "require expenditures of substantial development costs that would likely preclude future conversion back to agricultural uses if the opportunity for such conversion were to arise." (DEIR, 4.2-5.) The proposed Project will eradicate the existing orchard, compact the soil, and change the landscape. Given that both fruit and nut production are both monetarily expensive and time

L2-9

L2-10

intensive, it is very unlikely that the site would be converted back into orchard lands. Therefore, the Project's conversion of prime farmland is both permanent and will have a significant effect on the environment, both of which are not adequately analyzed or mitigated in the DEIR.

L2-10
Cont'd

3. Williamson Act

A significant portion of the Project is currently under a Williamson Act contract. Williamson Act contracted land should not be acquired by a governmental entity or joint powers authority to expand parks or wildlife refuges. These uses are incompatible with the continued agricultural use of surrounding agricultural properties. According to the Butte County Right to Farm Ordinance 35-2(b):


Where nonagricultural land uses extend onto agricultural land or exist side by side with agricultural operations, agricultural operations are frequently the subject of nuisance complaints. As a result, some agricultural operations are forced to cease or curtail their operations and many others are discouraged from making investments in improvements to their operations, all to the detriment of adjacent agricultural uses and the economic viability of the county's agricultural industry as a whole. It is the purpose and intent of this chapter to reduce the loss to the county of its agricultural resources by limiting the circumstances under which properly conducted agricultural operations on agricultural land may be considered a nuisance.

L2-11

Furthermore, the mere transfer of land to a governmental entity does not eradicate a Williamson Act contract, or abrogate any of the restrictions on use such as a contract imposes. As stated throughout the DEIR, the Nicolaus is property currently under Williamson Act contract and owned by The Nature Conservancy ("TNC"), and will be voluntarily transferred to the State Parks prior to Project development. This transfer will not attenuate any of the contract's obligations for the property to remain in agriculture, and any recreational facilities or other incompatible uses which are related to Project implementation will constitute a breach of the Williamson Act contract if they are undertaken prior to contract termination as a matter of course under non-renewal or a legally sufficient cancellation process.

Should you require further explanation of the above comments, please contact us at (530) 533-1473 or at buttecfb@sbcglobal.net. We thank you for the opportunity to comment on this proposed Project.

Sincerely,



Colleen Aguiar
Executive Director

**Letter
L2
Response**

**Butte County Farm Bureau
Colleen Aguiar, Executive Director
Received March 17, 2008**

- L2-1 Please refer to Common Response 3, “Adequacy of CEQA Document,” Common Response 4, “Impacts to Agricultural Operations,” and Common Response 5, “Impacts to Lands Under Williamson Act Contract.”
- L2-2 Please refer to Common Response 3, “Adequacy of CEQA Document” and Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L2-3 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and response to Comment L1-9.
- L2-4 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L2-5 Please refer to Common Response 5, “Impacts to Lands Under Williamson Act Contract.”
- L2-6 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L2-7 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and Common Response 7, “Buffer Zones.”
- L2-8 Please refer to Common Response 3, “Adequacy of CEQA Document,” and Common Response 4, “Impacts to Agricultural Operations.”
- L2-9 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and response to Comment L1-83.
- L2-10 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and response to Comment L1-83.
- L2-11 Please refer to Common Response 5, “Impacts to Lands Under Williamson Act Contract.”

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March 17, 2008

*Via e-mail dreichenberg@parks.ca.gov
& U.S. Mail*

California Department of Parks
and Recreation
Northern Butte's District Valley Sector
525 Esplanade
Chico, CA 95926

**Re: Comments of the Sacramento River Recreation District to
Draft Environmental Impact Report (DEIR) Bidwell-Sacramento River
State Park Habitat Restoration and Outdoor Recreation Facilities
Development Project**

Ladies and Gentlemen:

The Sacramento River Reclamation District (SRRD) makes the following comments to the Draft Environmental Impact Report (DEIR) Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project, which to some degree parallel previous comments made:

I. SRRD is a Responsible Agency. CEQA Requires Consultation Before the CEQA Document is Prepared.

We have written to you on September 21, 2007, September 5, 2006, December 29, 2005, December 2, 2005 and October 3, 2000. We have pointed out in each instance that being a Responsible Agency requires that the Lead Agency on these type of proposed projects and

L3-1

L3-2

conversions of real property under CEQA consult with the Responsible Agency in regard to floodway improvements, potential environmental impacts from changes in flood capacity or flow passage and in regard to means of avoiding significant environmental impacts, before preparation and during preparation of an EIR. Your idea of consultation, apparently, is to receive our letters, not respond and never communicate with SRRD, waiting for SRRD to appear after the DEIR has been prepared. This is not in conformance with California law, is a violation of CEQA, and creates a fundamental defect in the process which destroys the efficacy of CEQA. As can be seen in the DEIR, which does not even mention the functioning of the Mud Creek flood control levees designed by the Corps of Engineers which planned that the areas of the Nicolaus and Singh property would be open and farmed and without any significant barriers to flow in a westerly direction, your hydraulic modeling does not even reflect the functioning of an implemented Federal flood control project for Mud Creek, but instead focuses upon Sacramento River flows which are, as a flooding event, much less frequent and not a significant factor at all, in that it is recognized the back flows from the Sacramento River which occur long after peak flows of Mud Creek must be dispersed and fill these properties and then drain off when the Sacramento River levels are at flood stage. To demonstrate the irrelevance of what you have studied in this defective DEIR, it would have been equally relevant to study whether the sun is likely to come up each day and create a model to reflect that and ignore the impacts of building a skyscraper that blocks the sun for 3/4 of a day for a neighborhood.

L3-2
Cont'd

L3-3

L3-4

II. Mud Creek Provides for Passage of Flood Waters from Mud Creek Across Both the Singh Property and the Nicolaus Property. Your Project Will Impair the Functioning of the Army Corps of Engineers Mud Creek Project and Totally Ignores These Impacts.

These properties were farmed to walnuts, which walnut tree spacing and the maintenance of open space and of drainage swales through the property allowed the passage of water out of and from Mud Creek. There is a reason that there is on Mud Creek, a project levee on the west side of Mud Creek in the vicinity of these properties, and no levee on the east side. The reason is that flood flows must pass off and out of the channel in order to relieve pressure upon the west side levee of Mud Creek and not backup flows upstream and to provide for the orderly passage of flood flows. This is what the Army Corps of Engineers planned and built. The drainage swales and open space upon the Nicolaus property and the Singh property must be maintained to receive these Mud Creek flows and so that these properties can drain both the Sacramento River and Mud Creek when the Sacramento River flood flow levels decline.

L3-5

You have done a great deal of hydraulic modeling. However, the hydraulic modeling has nothing to do with the flows off of Mud Creek and ignores them totally. Instead, you model the effects of the Sacramento River backing into these properties. This is a rare event. As was

L3-6

pointed out at the oral hearing, and is obvious, flows out of Mud Creek occur much more often and have potentially greater damaging effects if these flows are not permitted to flow out of Mud Creek as the Army Corps of Engineers planned. You ignore this plan and function in your DEIR.

L3-6
Cont'd

Your plan calls for planted revegetation along the west bank of Mud Creek and the maintenance of a vegetative barrier on the west side of Mud Creek which will fill with debris, sediment and silt and prevent these natural and customary flows out of Mud Creek across these walnut orchards, backing water and debris into higher elevations of Mud Creek and potentially breaching the west side levee. Yet there is no discussion of these significant impacts or the mitigation measures available.

L3-7

III. Mud Creek is an Army Corps of Engineers Designed Project. This Project Interferes with and Threatens the Functioning of That Project.

By accepting maintenance of the Mud Creek Project, the County of Butte has agreed to maintain the flowage out of Mud Creek across the Nicolaus property and the Singh property. Your Project will block those flows eventually through the maintenance and perpetuation of vegetation barriers, the planting the vegetation and the accumulation of debris. Debris and sediment of this nature is routinely removed as a result of farming activities when property is farmed. There will no longer be any farming under your Project and no provision is made for the high flows in Mud Creek to have free passage across these lands as occurs presently. Your DEIR does not explain how Butte County, the maintaining agency of this Project, can approve the alternation of this Project plan. Blocking passage of these waters is a misdemeanor under Water Code section 720.

L3-8

L3-9

IV. You Have Not Examined the Environmental Impact of Blocking These Flows from Mud Creek upon Adjoining Agricultural Activities.

This is a significant environmental impact. Along the full easterly portion of the Nicolaus property, you propose to install a cottonwood riparian forest of 19.48 acres (see Map 3). The same revegetation, planting and barrier is proposed for the easterly side of the Singh property. Both of these properties are currently planted in walnuts, with large flowage spaces and capacity maintained to permit flows out of the Mud Creek facility. As a matter of fact, you propose the whole of the Singh property to become a riparian forest and show almost no grass meadow, which is the flowage pattern and resistance factor currently present on the these orchard properties (see Figure 2, page 3 of Hydraulic Model Appendix).

L3-10

This is a violation of the requirements of the Butte County adopted designated floodway ordinance requiring a permit for activities that are likely to significantly change flows or which potentially create deposits that may raise water levels and flowage velocity and mitigation by requiring removal of blockages or deposits is not even discussed as an alternate.

L3-10
Cont'd

V. Williamson Act.

Although the Nature Conservancy property or Nicolaus property is within the Williamson Act and subject to a recorded contract, you admit that the conversion of the Nicolaus property will, but for the fact that the property will be acquired by a public agency, result in a violation of the policies of the Williamson Act (pp. 4.2.4, 4.2.5), but after three pages, you state: "The proposed project would reestablish long-term processes and functions present in riparian habitat", and on page 4.2.9 state: "The provision is made for termination of a Williamson Act contract when land is acquired by a governmental entity". Nowhere, however, do you discuss the significant environmental impact upon the integrity and functioning of the Ag preserve system of the Williamson Act, allowing land to escape Williamson Act contract restrictions which require that land be farmed, as a term and condition of receiving the reduction in property tax benefit.

The only way a parcel of land can be extracted from the Williamson Act contract, is to elect to not renew the contract and wait ten years. Yet this project involves evasion of that requirement by Parks and Recreation acquiring the lands by purchase, then proposing to have the state, rather than Butte County, waive a cancellation penalty on the ten-year termination process. You do not discuss the effects of watering-down and discrediting an agricultural preservation program in Butte County, such as the Williamson Act, by allowing this private property owner, the Nature Conservancy, to escape the terms and conditions of the Williamson Act. As an example, there is a significant environmental impact on this program and the adjoining lands included in the Williamson Act, if the Williamson Act and its requirement that there be a slow and well-thought out conversion from agricultural to other uses through a ten-year termination process, can be avoided by a public agency acquiring title. The Williamson Act becomes a much less useful and trusted tool for protection of agriculture, and the benefits provided in protecting other agricultural lands from development such as you are planning and nuisance claims from your employees and campers and visitors by the reduction in property tax are totally lost to the surrounding agricultural lands.

L3-11

Your CEQA document ignores these impacts upon the Williamson Act program in Butte County and the integrity and reliability of that program in this and in other areas, and further ignores that unless the cancellation fee is collected, if the Department will not wait ten years to develop its non-agricultural uses, the taxpayers have effectively granted property tax reduction

benefits to the Nature Conservancy which they never repay to the citizens of the County or State of California, by preserving agricultural use during the ten-year termination period as was contracted to and agreed to by their predecessor.

The Nature Conservancy needs to pay a cancellation fee or a ten-year termination period must apply to maintain the integrity of the program and system. Looked at another way, this is a gift of public funds and has further direct environmental impact in that it discredits the Williamson Act and its organizational object to establish agricultural preserves which cannot be converted to other uses and which neighboring Ag operations can rely upon. None of these impacts are discussed.

A supplemental report describing the impacts upon the Williamson Act program within the geographical area and how they will be mitigated, together with a discussion of the impacts of discrediting the one successful measure of preserving agricultural uses and preventing urban-type intrusion used in this state is required.

VI. Does the DEIR Accurately Describe the “Project” in Regard to the Williamson Act?

Obviously, the secondary issue in regard to the Williamson Act is how does Nature Conservancy get authority to avoid the Williamson Act termination process and cancellation charges if they and Parks and Recreation do not wait the ten years? We believe a gift of public funds is occurring and that the California Parks and Recreation is part of an unlawful scheme to permit the avoidance of those charges and requirements. No application has been made to Butte County, the administering agency, for authority to cancel the project (Government Code §512881.2). No condemnation is occurring as provided in Government Code section 51295 which would remove the contract. The theory of Parks and Recreation that a ten-year termination in which no improvements could be constructed does not apply and can occur without completing the Butte County process described in Government Code section 51293 and that cancellation can be granted by the Department of Conservation itself, even though no eminent domain is occurring, is a device to give TNC additional monies in a purchase price and remove a substantial source of discounted values and limitation of use to farming from the land title for free to TNC.

The DEIR glosses over the provisions of Section 51291 of the Government Code and ignores that the County of Butte is the administering agency for the Williamson Act contracts within its jurisdiction. Unless the County of Butte after comments by the Director of Conservation makes the findings of Section 51292 that the plan of development of Parks and Recreation cannot be located on other lands, the State Director of Conservation never gets an

L3-11
Cont'd

opportunity to terminate the Williamson Act contract simply because the Department of Parks and Recreation buys the property.

The significance of the impacts on the environment, and upon the Williamson Act enforcement, can be seen in Government section 51290, which states that wherever practical, the location of state improvements shall be in areas other than agricultural preserves and shall be located on other land. In addition, Government Code section 51291 requires that the Secretary of Food and Agriculture, and the County of Butte, to approve of the acquisition of the land and of the termination for these purposes. That has not occurred. As far as we know, the notice and consultation requirements of these sections have not been complied with and are not discussed at all in the CEQA document. Government Code section 51295 provides for negation of the Williamson Act property conditions if the property is acquired by condemnation by the State of California. However, a friendly condemnation action between the State and TNC would give a right to other landowners to claim severance damages. It may be that the act of selling this property for the purposes of the Parks and Recreation Plan without approval of Butte County and as announced in the DEIR for the development of this project is, in and of itself, a violation of the Williamson Act and will subject the Nature Conservancy to a penalty in the amount of the cancellation fee, which will be at least several thousand dollars per acre. The Department of Parks and Recreation cannot indemnify or provide additional consideration to the Nature Conservancy for this violation and breach.

L3-11
Cont'd

IV. Conclusion.

A CEQA document that studies what the authors wish to study, which does not describe the project (changes to Army Corps of Engineers Mud Creek Plan; creating exceptions to Williamson Act Contract) and ignores the true impacts of the project, is insufficient to comply with the law. A CEQA document which ignores the flood flows from Mud Creek, the effect of building a vegetative levee or barrier between Mud Creek and this farmland and the Sacramento River, and which ignores the dilution and rendering of useless of the agricultural preserve program of the Williamson Act in this County, does not properly describe the Project being considered and does not identify significant environmental impacts and consider mitigation measures. If the Department of Parks and Recreation wishes to attempt to adopt an Overriding Consideration Determination in regard to the Williamson Act impacts, or the impacts upon the flood flows from Mud Creek potentially backing water on to other farmlands to the west and destroying the integrity of the Mud Creek levees opposite the Nicolaus and Singh properties, it may be able to do so, but not on the basis of this document.

L3-12

L3-13

The Williamson Act issues are clear, the Nicolaus property is within the Williamson Act, a cancellation fee is due and must be set by Butte County or a ten-year notice of nonrenewal

L3-14

California Department of Parks and Recreation – Northern Butte's District Valley Sector

Re: Comments of the Sacramento River Recreation District to Draft Environmental Impact Report (DEIR) Bidwell--Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project

March 17, 2008

Page -7-

must be given. Simply because title is changed from the Nature Conservancy to the State of California, does not escape a cancellation fee owed by the Nature Conservancy. The State of California cannot indemnify and protect a private landowner violating a Williamson Act, and purporting to cancel the contract, and there is no basis for concluding that the establishment of an RV park within an area is compatible with adjoining agricultural uses and serves to preserve agriculture.

L3-15

L3-16

There is a solution to this problem, which is to maintain farming on portions of this property, and the flowage capacity from Mud Creek, and to abandon the idea of creating a mobile home/recreational vehicle park within an agricultural preserve. Obviously, that would require California Department of Parks and Recreation to consult with Responsible Public Agencies, such as the County of Butte and the Sacramento River Reclamation District. Apparently, it is much more preferable to the Department of Parks of Recreation to pay millions of dollars to the Nature Conservancy for hydraulic studies of the Sacramento River, which when it does flood, has such vast impacts that there probably is little change in the areas of these properties, and yet to totally ignore the Mud Creek flows and the Army Corps of Engineers' design for the Mud Creek Project, which specifically provided for no levee on the west side of Mud Creek in these areas because it was understood Mud Creek would be able to flow across these open spaces. You are now proposing to plant dense vegetation in these open spaces and block those flows. Approval of the Army Corps of Engineers of the alteration of its Mud Creek Project is a pre-condition and studying the impacts of the alteration is a requirement of CEQA.

L3-17


L3-18

L3-19

L3-20

Very truly yours,

MINASIAN, SPRUANCE,
MEITH, SOARES & SEXTON, LLP

By 

PAUL R. MINASIAN

PRM/vlh

cc: Board of Directors, Sacramento River Reclamation District
Clint Maderos
John Mendonza
Board of Supervisors, County of Butte (Bill Connelly, Jane Dolan, Maureen Kirk, Curt Josiassen & Kim Yamaguchi)
Stuart Edell, Butte County Department of Development Services
Bruce Alpert, Butte County Counsel
Gregg Werner, Nature Conservancy

- L3-1 The written correspondence referred to in the comment, as well as responses to the scoping comments, were all included in Appendix A, "Project Scoping," of the Draft EIR and are included again in Appendix A of this Final EIR.
- L3-2 The State CEQA Guidelines Section 15381 defines a responsible agency as, "a public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term 'Responsible Agency' includes all public agencies other than the Lead Agency which have discretionary approval power over the project." As explained below, the Sacramento River Reclamation District (SRRD) does not have discretionary approval over the proposed BSRSP Habitat Restoration and Outdoor Recreation Facilities Development Project. Therefore, SRRD is not a responsible agency.

As the State arm and trustee over floodways and the protection of the main river systems, the Central Valley Flood Protection Board (CVFPB) has jurisdiction to receive, review and approve those plans that affect its territory. As explained in Section 4.3.2 and Appendix A, "Scoping Comments and Responses," of the Draft EIR, the CVFPB's duties are mandated by the State legislature in Water Code Section 8520 et. seq. In particular, Water Code Sections 8533 and 8534 establish CVFPB's jurisdiction in regard to flood protection along the banks of the Sacramento River. However, a Memorandum of Agreement, dated November 3, 1999, between Butte County and the State Reclamation Board (now called the CVFPB), delegated regulatory authority for flood control in the proposed project area to Butte County (roughly equivalent to the 100-year floodplain). In the vicinity of the project site, CVFPB has jurisdiction within the 20-year Federal Emergency Management Agency floodplain; CVFPB's jurisdiction ends at River Road, which is the westerly boundary of the project. Therefore, the Nicolaus property and the Singh Unit are located within Butte County's floodway jurisdiction.

The MOA states that Butte County shall not delegate its responsibility for regulating floodplain management to the SRRD without the approval of the CVFPB (see MOA text, Section D and Section 15). This approval has not been granted (see MOA text, Section D). However, the County may allow SRRD to have an advisory roll to the County in exercising its regulatory authority (see MOA text, Section D and Section 15). Additionally, pursuant to Section 8 of the MOA, when Butte County learns of a proposed action that it may be without jurisdiction to regulate, the County shall notify the CVFPB. In that event, CVFPB may exercise its jurisdiction under Water Code 8710 to require an application for an encroachment permit. It should be noted that State Parks, a State agency, is not subject to local or County policies or regulations. The MOA recognizes this situation (i.e., Butte County does not have jurisdiction over a State agency), and therefore, the County can request that CVFPB assume jurisdiction.

As established in Water Code Section 8520 et. seq., as well as in the November 3, 1999 MOA, SRRD does not have discretionary approval over the proposed project; however, Butte County may, at its discretion, allow SRRD to have an advisory roll to the County. Pursuant to CEQA Guidelines Section 15381, because the SRRD does not have discretionary approval over the proposed project, it is not a responsible agency.

In regard to a floodway encroachment permit for the project, State Parks has initiated consultation with Butte County and CVFPB to determine the proper procedure for a floodway encroachment permit application to address the project's potential effects on the Sacramento River floodway (per Water Code Section 8710). State Parks shall apply for a floodway encroachment permit as directed by Butte County and CVFPB and shall not implement the proposed project until a permit is issued from the appropriate agency.

It should also be noted that the project-related impacts to flood hydrology, geomorphic processes, temporary and long-term water quality, and water supply are addressed in Impacts 4.3-a through 4.3-e of the EIR. With the implementation of Mitigation Measure 4.3-c, acquisition of appropriate regulatory permits and implementation of a storm water pollution prevention plan (SWPPP) and best management practices (BMPs), the project would result in less-than-significant impacts to flood hydrology, geomorphic processes, water quality, and water supply. The hydraulic modeling supporting the impact analysis is provided in Appendix B of the Draft EIR. The hydraulic modeling was revised in response to comments on the Draft EIR. The revised modeling analysis results led to a determination that the project would result in less-than-significant impacts to the flood level elevations and flood flow velocities in the project area. Please refer to Common Response 6, "Revised Flood Neutral Hydraulic Analysis," for more information regarding the revised hydraulic analysis and its results.

In addition, please refer to Common Response 2, "Adequacy of CEQA Public Noticing," and Common Response 3, "Adequacy of CEQA Document."

L3-3

The U.S. Army Corps of Engineers (USACE) flood control plans for the project site were obtained from Stuart Edell, Butte County Deputy County Surveyor and reviewed by TNC (pers. comm., Luster 2008). According to the 1961 Army Corps Mud, Big Chico, and Sandy Gulch Channel Improvement and Levee Construction Plan, landowner opposition to the plan resulted in USACE not building a levee on the west side of Mud Creek between Sacramento Avenue and the Sacramento River. Opposed landowners were primarily those owning land on the west side of Mud Creek between Sacramento Avenue and the Sacramento River. Therefore, there is no "design project" on the Nicolaus property or Singh Unit. The 1961 USACE report (Page 5, Section 11a) states:

"....Therefore, in view of the opposition of the local interests and in accordance with the request of the Reclamation Board, channel improvement and right bank levee construction in the above reach has been excluded from the plan of improvement."

The flood control system was built the way it is because local land owners did not want a levee on the west side of Mud Creek. USACE did not design the project with a levee on the Singh Unit in mind; therefore, it could be argued that the current berm on the eastern portion of the Singh Unit is counter to the project design.

Additionally, the historic east-west slough on the Singh Unit was filled with spoil material from the channel widening portion of the USACE project as illustrated in Exhibit 8-1. Additionally, the USACE plan addresses levee construction and channel widening for the tributaries; it does not contain any guidelines for land use on the dry sides of the levee (such as requiring that fields must be in agriculture).

It should also be noted that the project-related impacts to flood hydrology, geomorphic processes, temporary and long-term water quality, and water supply are addressed in Impacts 4.3-a through 4.3-e of the EIR. With the implementation of Mitigation Measure 4.3-c, acquisition of appropriate regulatory permits and implementation of a SWPPP and BMPs, the project would result in less-than-significant impacts to flood hydrology, geomorphic processes, water quality, and water supply. The hydraulic modeling supporting the impact analysis is provided in Appendix B of the Draft EIR. The hydraulic modeling was revised in response to comments on the Draft EIR. The revised modeling analysis results led to a determination that the project would result in less-than-significant impacts to the flood level elevations and flood flow velocities in the project area. Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis,” for more information regarding the revised hydraulic analysis and its results.

- L3-4 Please refer to response to Comment L3-3, above, and Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L3-5 Please refer to response to Comment L3-3, above.
- L3-6 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L3-7 The Riparian Habitat Restoration Plans for the Singh Unit and Nicolaus property, provided in Appendix C of this EIR, do not call for any work on the banks of Mud Creek. Riparian habitat restoration would include removal of the berm on the Singh Unit west of Mud Creek and restoring cottonwood riparian forest along the eastern portions of the Singh Unit and Nicolaus property, also west of Mud Creek. Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L3-8 Please refer to responses to Comments L3-2 and L3-3, above, and Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L3-9 Please refer to response to Comment L3-2, above.
- L3-10 The project-related impacts to flood hydrology, geomorphic processes, temporary and long-term water quality, and water supply are addressed in Impacts 4.3-a through 4.3-e of the EIR. With the implementation of Mitigation Measure 4.3-c, acquisition of appropriate regulatory permits and implementation of a SWPPP and BMPs, the project would result in less than significant impacts to flood hydrology, geomorphic processes, water quality, and water supply. The hydraulic modeling supporting the impact analysis is provided in Appendix B of the Draft EIR. The hydraulic modeling was revised in response to comments on the Draft EIR. The revised modeling analysis results led to a determination that the project would result in less-than-significant impacts to the flood level elevations and flood flow velocities in the project area. Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis,” for more information regarding the revised hydraulic analysis and its results. In addition, please refer to response to Comment L3-2, above.
- L3-11 Please refer to Common Response 5, “Impacts to Lands Under Williamson Act Contract.”
- L3-12 Please refer to response to Comment L3-3, above, Common Response 3, “Adequacy of CEQA Document,” Common Response 5, “Impacts to Lands Under Williamson Act Contract,” and Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L3-13 Please refer to Common Response 3, “Adequacy of CEQA Document,” Common Response 5, “Impacts to Lands Under Williamson Act Contract,” and Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”

- L3-14 Please refer to Common Response 5, “Impacts to Lands Under Williamson Act Contract.”
- L3-15 Please refer to Common Response 5, “Impacts to Lands Under Williamson Act Contract.”
- L3-16 In response to agency and neighbors’ comments on the Draft EIR, the recreation plans (see Appendix D of this Final EIR) have been revised to remove RV campgrounds from the Nicolaus property and to remove one of the entry points at the old BSRSP headquarters site (to be used as a day use area) and provide more of a vegetative buffer to the neighbor across River Road. In addition, please refer to Common Response 4, “Impacts to Agricultural Operations.”
- L3-17 As described above in response to Comment L3-16, in response to comments on the Draft EIR, the RV campgrounds have been removed from the recreation plans (see Appendix D of this Final EIR). In addition, please refer to Common Response 1, “Opposition to the Proposed Project,” Common Response 5, “Impacts to Lands Under Williamson Act Contract,” and Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- L3-18 Please refer to response to Comment L3-2.
- L3-19 Please refer to response to Comment L3-3.
- L3-20 Please refer to responses to Comments L3-2 and L3-3, as well as Common Response 3, “Adequacy of CEQA Document,”

Reichenberg, Denise

From: Patricia Puterbaugh [cohasset@shocking.com]
Sent: Monday, February 04, 2008 12:35 PM
Cc: Reichenberg, Denise; Germain Boivin; John Merz
Subject: BSRSP Habitat Restoration and Outdoor Rec Facilities Project

Feb. 4, 2008

Patricia Puterbaugh, Germain Boivin
Floral Native Nursery
2511 Floral Ave.
Chico, CA. 95973

Re: BSRSP Habitat Restoration and Outdoor Recreation Facilities Development Project,
Butte County California

We would like to give our support to the plan for habitat restoration and recreation plans for the Bidwell-Sacramento River State Park on the Singh Unit and the Nicolaus property along the Sacramento River. Our nursery has been promoting restoration and reclamation of habitat in Northern California for the last decade. We feel strongly that native plants and restoration will be a huge factor in flood prevention, fire safety, drought resistance and water conservation in our North state for the near and distant future.

As you are aware, riparian vegetation has been descimated in California, along with the wildlife and birds that depend on it. We are very pleased for the plan to restore this beautiful area back to its natural state. We also support the plan for camping and recreation facilities in this area. This will provide a unique opportunity for the public to enjoy and appreciate the Sacramento River and environs.

Please keep us posted on plans for this project.

Sincerely, Patricia and Germain

11-1

**Letter
11
Response**

**Patricia Puterbaugh and Germain Boivin
Floral Native Nursery
Received February 4, 2008**

I1-1

Support for the project is noted. State Parks will consider the environmental document, including public and agency comments, as well as the complete record for this project in rendering a project decision.

Clint Maderos
Clint Maderos Backhoe Service
12102 River Road
530-345-8665
530-514-8664

February 18, 2008

California Department of Parks & Recreation
RE: Bidwell River State Park
Habitat Restoration and Outdoor Recreation
Facilities Development Projects
DEIR

Dear People concerned with this plan,

I am Clint Maderos, owner of the 22 acre parcel of walnut orchard and home adjacent to the proposed site of the campground, and located approximately 35 feet from the proposed new Day Use Area. I became aware of the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project when I received the DEIR in the mail on Thursday January 31, 2008.

It is worthy of note that the initial announcement regarding this plan was published in the newspaper, and I was not informed with a letter. Clearly, the parties drafting this plan are aware of my name and address. I am pleased to learn that a NOP was filed with the State Clearinghouse, was posted on the State Parks website, as well that its' availability was advertised in the Chico Enterprise-Record on September 8, 2007. Unfortunately for me, that announcement escaped my notice. My name is not mentioned anywhere in the DEIR. Properties contiguous to the plan area owned by private citizens are not labeled by name. This privilege is reserved for citizens who have sold their properties to TNC. As a neighbor, I am impressed with the absence of a level of fundamental courtesy employed to date to communicate regarding a proposal that will no doubt have the greatest Environmental Impact on me, and life in my home, of all the citizens affected by this plan.

12-1

I would have to say that "Goal AO-4 Cooperate with local landowners, communities, and public agencies to foster coordinated management of public lands along the Sacramento River," and "Goal AO-4.4 Work with private landowners in proximity to the Park to minimize conflicts associated with the mixed public and private land ownership pattern in the area", as listed in the Introduction, have yet to be reached.

12-2

In the year 2006, George Nicolaus introduced me to a TNC representative and we engaged in an informal conversation regarding concerns I might have had about the sale of the parcel. At that time I expressed a need to create a buffer zone, but we did not discuss the depth of such a zone. No mention was made of a Day Use Area, or of a

12-3

campground that includes 25 RV sites, 15 vehicle campsites, and 10 walk-in tent sites, as well as a group campground large enough to accommodate 12 more RV's and a 20 person group fire ring. No amount of a buffer will mitigate the noise from this amount of human activity. I am accustomed to the speeding cars, the barreling trucks, and the gunshots from hunters on the adjacent Fish and Game lands. More noise will be produced by a campground, full or otherwise, and I will hear all of it.

12-3
Cont'd

Let's assume that concern for the level of noise that reaches me at my home day and night is not a serious problem, or germane, for now. I would like to address points of controversy not mentioned in the Summary (2.5 Areas of Controversy).

12-4

Table 2-1, Impacts 4.3 states "Modeling results predicted localized changes in flood stage elevations up to 0.10 foot. This small change does not represent an increase that would pose a significant risk to people, structures, or the operation of flood control infrastructure and does not violate existing regulations for risk to flood control infrastructure. Project-related changes in local and downstream flood hydrology would be less than significant." While computer modeling of flooding is impressive, when the 0.10 inches of water is inside your house, one might reconsider the assessment that no mitigation is required regarding the changes in local flood hydrology.

12-5

The assessment of flood hydrology in the DEIR deals with flooding from the Sacramento River and does not take into consideration flooding from Mud Creek or Rock Creek. Restoration will affect the flow of flood waters. Water flows through orchard faster than it will through vegetation, brush, and trees. Water will flow more slowly over raised campsite pads. More flood water will collect on my property as a result of this project, and will drain from it more slowly. This is a threat to the health of my orchard, and to my income.

12-6

Nowhere in this DEIR is addressed the fact that Mud Creek floods numerous times annually. What will be the effect of Mud Creek floods on the Maderos Property when the Nicolaus property is restored with a new, uncalculated volume of vegetation?

12-7

Flooding has occurred on my property, between 1995 and 1999, with water from the Sacramento River. The water entered my house on three different occasions, in three separate years. On three other occasions, the water reached the threshold of the doorway into my house. On each of these events the proposed campsite was entirely underwater.

12-8

Let me introduce the issue of the location for the new diesel ag pump that will be situated directly across the street from the new Day Use Area. The well is existing. The Maderos property, and the Maderos house, (not labeled in any of the photographs in the DEIR) is currently irrigated by water pumped on the Nicolaus property. When this is taken out of operation, my orchard will be irrigated from the well on my parcel, from the pump house that is clearly visible from the proposed new Day Use Area.

12-9

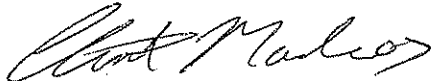
In this report no justification is made for the timing of this development, or for the placement of the Day Use Area, i.e. why place such a facility in the front yard of the one

12-10

neighbor to the project? Why now? What citizens are clamoring for a new campground that floods annually? Why not restore with habitat with no campground development, until such time that the land within the natural boundary of Mud Creek is acquired? I think this could be germane to reaching Goals AO-4 and AO-4.

I2-10
Cont'd

Deeply concerned,



Clinton A. Maderos

I2-1 Please refer to Common Response 2, "Adequacy of CEQA Public Noticing." It should be noted that names and address of private land owners are not provided in the environmental document to protect their privacy.

I2-2 Please refer to Common Response 2, "Adequacy of CEQA Public Noticing." In addition, please refer to Appendix A of the EIR for a summary of scoping comments and responses.

I2-3 Please refer to Common Response 7, "Buffer Zones."

In response to agency and neighbors' comments on the Draft EIR, the recreation plans (see Appendix D of this Final EIR) have been revised to remove RV campgrounds from the Nicolaus property. In addition, the proposed day use area, located west of River Road, across from the residence north of the Nicolaus parcel, would replace the existing BSRSP headquarters and day use area. In response to comments on the Draft EIR, the revised Conceptual Public Access and Recreation Plan (see Appendix D of this EIR) now includes only one point of entry/exit off of River Road, which is off-set from the driveway to residence across River Road, and vegetation would be planted along River Road to provide a vegetative buffer between the day use area and the road. Use of the day use area is not expected to substantially increase in comparison to the existing use, because the headquarters offices will be moved from that site to the farm complex on the Nicolaus property and the parking capacity would not substantially increase. Furthermore, the hours of operation for the day use area would be restricted from sunset to sunrise and the entry/exit to the area would be gated.

I2-4 The existing noise environment at the Singh Unit and Nicolaus property is defined by active agricultural operations at the onsite orchards, which generate noise associated with farming activities (vehicles, farm equipment, people working, etc.), as well as neighboring agricultural operations, local roadway traffic on River Road, and recreational activities associated with Bidwell-Sacramento River State Park. The proposed day use area, located west of River Road, across from the residence north of the Nicolaus property, would replace the existing BSRSP headquarters and day use area. For the proposed project to cause a significant noise increase, capacity at the day use area would need to double. However, parking capacity at the proposed day use facility would not substantially increase capacity in comparison to existing headquarters and day use area, and therefore would not significantly increase noise levels associated with the day use area. Additionally, the hours of operation for the day use area would be restricted from sunset to sunrise, limiting the potential for noise generation during more sensitive nighttime hours.

The proposed day use area located at the existing park headquarters would have capacity to accommodate five oversized vehicles (i.e., RV, bus) and 12 regular passenger vehicles. Based on the methodology outlined in Section 4.1.2 of the EIR, the proposed day use area would generate an average daily noise level of 52.4 dB L_{dn} , which would not exceed the "normally acceptable" standard of 60 dBA L_{dn} . Additionally, replacing the existing headquarters as a day use facility would include changing the entry/exit to a single point of access off of River Road, a gate at that entry point, vegetative screening along River Road, and limiting the hours of operation for the park from sunrise to sunset. Please refer to Appendix D of this Final EIR for the revised recreation plans.

Implementation of an acoustical set-back is a proven method to mitigate noise between a source and a receiver. As stated in response to Comment L1-50, sound generated from a point source will attenuate (lessen) at a rate of 6 dB to 7.5 dB per doubling of distance. In respect to transportation generated noise, levels typically attenuate 4.5 dB per doubling of distance. The development of dense vegetative habitat (i.e., heavy woods, trees, shrubs) would further attenuate noise levels at a rate 5 dB per 100 feet of dense vegetation, up to 10 dB. The proposed project includes the development of dense riparian habitat surrounding the recreational and camping facilities, which would be located in the center of the Nicolaus property, approximately 1,800 feet from the residence north of the Nicolaus property.

- I2-5 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- I2-6 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- I2-7 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- I2-8 Comment noted. Section 4.3 of the EIR discusses the existing hydrology of the project area and flood flow patterns.
- I2-9 Commented noted that a new pump for an existing groundwater well will be installed across River Road from the existing BSRSP headquarters and day use site.
- I2-10 Please refer to Common Response 1, “Opposition to the Proposed Project.”

March 6, 2008

Denise Reichenberg
California State Parks
Sector Superintendent
525 Esplanade
Chico, CA 95926

Dear Denise:

We vigorously protest the new River Road State Campground and Day Use Area proposed by the California State Parks and Recreation.

13-1

We feel installing these two new parks on a two-lane windy back road next to a private orchard and home makes no sense and is altogether wrong.

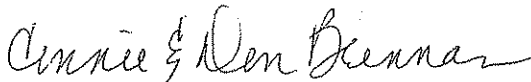
The proposed campground has no view of the Sacramento River. It is in a well known flood area on a road away from any main highway. There is a well established beautiful river campground with easier highway access only 15 miles north. Woodson Bridge is scheduled to be closed, as are other State Parks because of the current severe budget deficits. Therefore, how can building a new park be justified? I think the governor should be alerted to this unfair use of public funds.

13-2

We do not see how building this new park can be justified while our public classrooms and teachers are suffering huge revenue cut backs. There are numerous other public agencies that face the same cut backs. This proposal sounds like corruption and favoritism in our opinion.

Please review all the evidence and reports available and hopefully you will also oppose the creating of these two new public parks. Thank you.

Sincerely,



Connie & Don Brennan
1058 Lia Way
Chico, CA 95926

- I3-1 Please refer to Common Response 1, “Opposition to the Proposed Project.”
- I3-2 The possible closure of Woodson Bridge State Recreation Area (SRA) is in no way related to the proposed BSRSP Habitat Restoration and Recreation Facilities Development Project. The Woodson Bridge SRA is proposed for temporary closure due to State budget cuts, which affect State Parks’ general fund. Whether or not Woodson Bridge SRA is closed will depend on the fiscal allowances to State Parks in the annual State budget.
- Funding for the planning and environmental review (CEQA process) of the proposed BSRSP Habitat Restoration and Recreation Facilities Development Project is not dependent upon the State budget or State Parks’ general fund. The planning and environmental review is funded by a CALFED Ecosystem Restoration Program (CALFED ERP Program) grant (ERP-02-P16D) (see Section 1.4 of the Draft EIR). The mission of the CALFED ERP Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the San Francisco Bay/Sacramento-San Joaquin Delta.
- The CALFED ERP grant does not provide funding for implementation of the BSRSP Habitat Restoration and Recreation Facilities Development Project. Therefore, implementation of the proposed project will be dependent upon future funding, which could be in the form of grants or other sources of funding. It is not known at this time when funding will be available for project implementation or what the funding source will be. Once the project is constructed, operations and maintenance of the restored habitat and recreation facilities would be subject to State Parks operating funds.

3/09/08

DENISE REICHENBERG
CA STATE PARKS
525 ESP.
CHICO CA. 95926

DEAR DENISE —

THE NEW PROPOSED RIVER ROAD CAMPGROUND
AND DAY USE AREA "DO NOT MAKE SENSE"

14-1

I AGREE WITH MR. CLINT MADEROS (LETTER DATE 3/3)
I AGREE WITH MR + MRS BRENNAN (LETTER DATE 3/6)

14-2

THE MONEY SHOULD BE USED TO KEEP
EXISTING PARKS IN USE. EX: WOODSON BRIDGE

14-3

Sincerely

DAVID WAZAR
1386 W. 12th AVE
CHICO CA 95926

- I4-1 Please refer to Common Response 1, “Opposition to the Proposed Project.”
- I4-2 Please refer to responses to Comments I2-1 through I2-10, I3-1 and I3-2, and I6-1 through I6-35.
- I4-3 The possible closure of Woodson Bridge State Recreation Area (SRA) is in no way related to the proposed BSRSP Habitat Restoration and Recreation Facilities Development Project. The Woodson Bridge SRA is proposed for temporary closure due to State budget cuts, which affect State Parks’ general fund. Whether or not Woodson Bridge SRA is closed will depend on the fiscal allowances to State Parks in the final State budget.

Funding for the planning and environmental review (CEQA process) of the proposed BSRSP Habitat Restoration and Recreation Facilities Development Project is not dependent upon the State budget or State Parks’ general fund. The planning and environmental review is funded by a CALFED Ecosystem Restoration Program (CALFED ERP Program) grant (ERP-02-P16D) (see Section 1.4 of the Draft EIR). The mission of the CALFED ERP Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the San Francisco Bay/Sacramento-San Joaquin Delta.

The CALFED ERP grant does not provide funding for implementation of the BSRSP Habitat Restoration and Recreation Facilities Development Project. Therefore, implementation of the proposed project will be dependent upon future funding, which could be in the form of grants or other sources of funding. It is not known at this time when funding will be available for project implementation or what the funding source will be. Once the project is constructed, operations and maintenance of the restored habitat and recreation facilities would be subject to State Parks operating funds.

From:
Name

Daniel C. Heel

Date 3/14/08

Address

12206 Meridian Rd.

Chico, Ca 95973

530.345.2142

To:

Denise Reichenberg
California Department of Parks and Recreation
Northern Buttes/Valley Sector
525 Esplanade
Chico, California 95928

Comment on California Department of Parks and Recreation
Draft Environmental Impact Report
Bidwell-Sacramento River State Park
Habitat Restoration and Outdoor Recreation Facilities Development Project
Butte County, California

Comment:

It is appalling to me that the Butte County Board of Supervisors could have a negative comment on this project. We need multi use of the Sacramento River corridor, not just use - preservation only. We need smart use. From what I have seen, read and heard of this project, it is a win win for Butte County. Campsites, facilities, nature trails, habitat restoration - what more could you ask for - all maintained by the state with little cost to the county. Increased tourism brings outside dollars to our area. Pass this plan. It is well planned and well thought out. Shame on our board of supervisors!

Sincerely,

Daniel C. Heel

15-1

**Letter
15
Response**

**Daniel C. Heal
Received March 14, 2008**

I5-1

Support for the project is noted. State Parks will consider the environmental document, including public and agency comments, as well as the complete record for this project in rendering a project decision.

Clint Maderos
Clint Maderos Backhoe Service
12102 River Road
530-345-8665
530-514-8665

March 15, 2008

Denise Reichenberg
Sector Superintendent
California Department of Parks & Recreation Northern Buttes District/Valley Sector
RE: Bidwell River State Park
Habitat Restoration and Outdoor Recreation
Facilities Development Projects
DEIR

Dear Denise Richenberg,

I again submit my opposition and critique of your California Department of Parks and Recreation plan for Bidwell River State Park, and request your attention to the following:

1. The Day Use Area should be moved to the south near the campground entrance, close to the center of the proposed trails, not in front of the only residence near proposed project. | 16-1
2. All agricultural setbacks, i.e. 300' should be observed. | 16-2
3. No lights should be placed around any neighboring residence. | 16-3
4. The issue of noise from the campground is not addressed adequately. On page 4.1-8, the Operational Traffic Noise section states that the noise levels are calculated at 50 feet from the centerline of River Road, but the table lists noise levels 100' from the centerline of the road. Which measurement is correct? The noise level including the penalty for noise after 10pm is close to the noise levels of the various construction equipment noise levels. The noise receptor, i.e. my home is not 1500' away from the noise, it is closer to 150' away. This is not less than significant. It is unacceptable. It is an invasion and detriment to the quality of my life in my home. | 16-4
5. The DEIR states that RV campers will have access to electrical outlets. It does not state that RV's will **not** use generators, and does not address noise produced by generators. This is an unresolved issue, and it is unacceptable. | 16-5

- | | |
|---|-------|
| 6. Garbage clean-up from the restored habitat areas after flood or high water has not been addressed. This plan will install dense brush. As the plan has not addressed the flooding from the creeks, it does not address the issue of garbage that floats in, or how to remove it from the newly planted brush. | 16-7 |
| 7. The fire hazard from Mud Creek onto the restored new habitat, and adjacent campground, from orchard burning or any other fire, has not been addressed. Note that from 1987-2007 at least four large fires have burned at or near the proposed site. | 16-8 |
| 8. In section 3-23 the DEIR states "Vault toilets and RV dump station could be sealed when necessary and would be pumped by a local contractor." If the toilets can be sealed, why would they require pumping? Is the plan admitting that there exists the potential for these toilets to flood, or that they cannot in fact be sealed well enough to prevent filling with flood water, in which case waste water could enter the environment of the campground and neighboring properties? | 16-9 |
| 9. Traffic study has wrong speed limit for River Rd. The speed limit on River Road is not posted, therefore it is 55mph, not 35mph as stated in this DEIR. | 16-10 |
| 10. Bike traffic on River Road is not adequately addressed, i.e. this DEIR points out that the property will be taken out of the Butte County General Plan, so that the bicycling concerns will be addressed by the fact that the State is not required to follow the counties plan? The DEIR's lack of commitment to addressing bicyclists issues is evading the need to address these concerns. | 16-11 |
| 11. This DEIR does not address shooting activity in Mud Creek next to campsites or hunting on DFG land next to and west of proposed trails. Why has this issue been ignored, and how will it be addressed? | 16-12 |
| 12. Poison oak planting is a health hazard to the public. | 16-13 |
| 13. Why build a RV campground when fuel is reaching \$4 gallon, RV sales are falling locally and a local RV dealer is closing down? The State government is trying to reduce greenhouse gases and pollution, i.e. SB97 of 8.07. How do these conditions justify promoting the use of RV's? | 16-14 |
| 14. The EIR tiered issues are not adequately addressed. | 16-15 |
| 15. Section 1.7.3: the list of other interested agencies is not complete, i.e. the Sacramento River Reclamation District is not listed on the list of interested Agencies. | 16-16 |
| 16. Section 1.8 Public Review Process was incomplete. Issues are not being addressed. | 16-17 |

- | | |
|---|----------------|
| <p>17. Section 4.0 The hydraulic modeling utilized to support this plan is incorrect because it is incomplete. According to EDAW representative Brian, Mud Creek, Rock Creek/Kusal Slough, Lindo Channel, and Chico Creek flooding is not gauged and therefore not accounted for in the DEIR. The Sacramento River flood modeling does not represent accurately the flooding on the proposed plan area.</p> | <p> 16-18</p> |
| <p>18. Mud Creek, Rock Creek/Kusal Slough, Lindo Channel, and Chico Creek all border the easterly boundary of this proposed project and were not included in the DEIR survey. This DEIR is incomplete without analysis of flood water patterns from the above creeks. They flood these properties annually. It is not acceptable to move forward on a plan that lacks sufficient data to support the plan. The missing data needs to be collected, recorded, and analyzed first. Also, Mud Creek is not defined as the main flood control channel for Chico, so it seems less than prudent to utilize hydraulic modeling data from the Sacramento River to determine the impacts from, and on, these other creeks. I do not accept that even slight slowing of the velocity of water in Chico's main flood control channel can have no significant impact to Chico.</p> | <p> 16-19</p> |
| <p>19. Section 5.0 reports a "2.5 f/s increase from 1.0g/s to 3.5 f/s" This represents a 250% increase. How can the State park justify the claim that this will cause no harmful effects?</p> | <p> 16-20</p> |
| <p>20. The concept plan in appendix B shows mature, large trees. (i.e. trees with 50' diameter story) and meadow; this does not visually represent what the proposed planting schedule calls for. The plan is to plant a massive quantity of brush, blackberries, poison oak and the like.</p> | <p> 16-21</p> |
| <p>21. The wastewater treatment plant is noted but not detailed. What are the specifics?</p> | <p> 16-22</p> |
| <p>22. Section 1.5 The Notice of Preparation was inadequate. I was never notified. What's more, my concerns have not been adequately addressed.</p> | <p> 16-23</p> |
| <p>23. Impact 4.2b This DEIR claims that 0.7 of 1% of agricultural production will be lost by installing this park plan (i.e. the removal of 146 acres of walnuts). In terms we can all appreciate, this number represents \$362,400, annually.</p> | <p> 16-24</p> |
| <p>24. How does removing 5275 existing walnut trees, in rows, and replacing that with 38,323 trees and brush, without any provision to remove any deadfall or brushy tangle, not restrict water flow?</p> | <p> 16-25</p> |
| <p>25. Section 4.1-9 states that there is one water well on the Nicolaus property, but in fact there are at least 4 wells on the property. This type of inaccurate reporting and consulting contributes to the perception that this plan is poorly thought out, and makes it difficult to have confidence in this plan. The sources of expert knowledge, the neighboring landowners of these properties, have not been</p> | <p> 16-26</p> |

- | | |
|---|-----------------|
| consulted. It does not appear that the writers of this plan have walked the properties. | 16-26
Cont'd |
| 26. The Board of Supervisors of Butte County collectively agree that the State Parks fail to adequately patrol and monitor their parks within Butte County. The county pays the cost of picking up the slack. This is not an unfounded concern. | 16-27 |
| 27. Pest setback must be at least 300' before any trees or brush. | 16-28 |
| 28. A drainage ditch or swell, that can be maintained (2' deep x 24' wide, sloped about 1-in-6 so a loader can clean it out) needs to be installed from Mud Creek to near River Road. | 16-29 |
| 29. The above drainage ditch or swell must be maintained by the State Parks. | |
| 30. If setbacks are not large enough or maintained, it will result in additional cost for spray and spraying labor for my orchard. How will I be compensated for this burden? | 16-30 |
| 31. I will need something in writing promising that my spraying, burning, or diesel irrigation pump noise will never be in conflict with the park, ever. | 16-31 |
| 32. My western property line will need a 300' for setback as required by Butte County Ag codes. | 16-32 |
| 33. A-4 (Responses from scoping comments section, Line 29) claims that the State Park will work with private landowners in proximity to minimize conflicts associated with the proposal. I have never at any point perceived that anyone related to this plan has "worked" with me. From my point of view, the state Park has failed to meet Park Plan Goal AO-4.4. | 16-33 |
| 34. I hereby request a copy of the concerns voiced and recorded by the State Parks of the meeting on 2-19-08 held at Bidwell Mansion. | 16-34 |
| 35. I hereby request a notice of your receipt of this list of concerns. | 16-35 |
| 36. I hereby request to be notified as to how the State Park plans to address these specific points. | |

Sincerely yours,



Clint Maderos

- I6-1 Please refer to Common Response 1, "Opposition to the Proposed Project."
- I6-2 The proposed day use area, located west of River Road, across from the residence north of the Nicolaus parcel, would replace the existing BSRSP headquarters and day use area. In response to comments on the Draft EIR, the revised Conceptual Public Access and Recreation Plan (see Appendix D of this EIR) now includes only one point of entry/exit off of River Road, which is off-set from the driveway to residence across River Road, and vegetation would be planted along River Road to provide a vegetative buffer between the day use area and the road. Use of the day use area is not expected to substantially increase in comparison to the existing use, because the headquarters offices will be moved from that site to the farm complex on the Nicolaus property and the parking capacity would not substantially increase. Furthermore, the hours of operation for the day use area would be restricted from sunset to sunrise and the entry/exit to the area would be gated.
- I6-3 Please refer to Common Response 7, "Buffer Zones."
- I6-4 Please refer to Section 4.1.2 of the EIR for a discussion of the project's effects on aesthetics. The relocation of the BSRSP headquarters to the Nicolaus farm complex would allow for the removal of structures, fencing and equipment at the existing headquarters site. The site would remain in use as a day use area; the hours of operation would be restricted from sunset to sunrise and the entry/exit to the area would be gated. Because this site would only be used during the day, no nighttime lighting would be installed. Furthermore, campgrounds and recreation facilities on the Nicolaus property would be developed near the center of the property (see Exhibit 3-9 of the EIR) and would be surrounded by restored riparian vegetation (see Exhibit 3-8 of the EIR), which would provide a vegetative screen between the facilities and River Road/adjacent properties.
- I6-5 Operational traffic noise levels as presented in Table 4.1-2 of the EIR reference traffic noise levels at the modeled distance (100 feet from roadway centerline). At a distance of 65 feet from the River Road centerline (approximate distance to the neighboring residence), traffic noise levels would be 54.7 dB L_{dn} and 57.6 dB L_{dn} , respectively with and without the proposed project.
- The commenter is correct in stating that average daily construction noise levels generated from the implementation of the proposed project would be similar to those generated by operational traffic noise. However, noise levels generated from construction activities would be temporary, only occurring for the duration of project development. As such, operational traffic noise levels would only be generated after completion of project development, would not be concurrent to construction noise levels, and would not result in noise levels exceeding the Butte County Noise Element 60 dB L_{dn} standard.
- As stated in the construction noise analysis, the nearest noise-sensitive receptor (residence) is located approximately 400 feet from the northern property boundary of the Nicolaus parcel, and 1,800 feet from the acoustical center of construction activities. Assuming a standard stationary source attenuation rate of 6 dB per doubling of distance, noise levels generated from construction activities on the Singh Unit and Nicolaus property would be less than 54 dB L_{dn} at the residence. Furthermore, strict adherence to construction noise control measures required by the Butte

County Planning Department and establishment of a noise control coordinator would significantly reduce the effects of construction noise in the project vicinity.

Construction activities occurring at the existing park headquarters and day use facility would consist of the removal of existing park headquarters office, the dismantling of existing storage sheds, and the development of the site for day use activities. Modifications to the existing day use facilities are not expected to require the use of heavy equipment (graders, excavators, dozers). As a result, construction generated noise levels at the existing headquarters are not expected to exceed the Butte County Noise Element 60 dB L_{dn} standard.

- I6-6 In response to comments on the Draft EIR, the RV campsites have been removed from the recreation facilities plans (see Appendix D of this Final EIR), which would reduce project-generated stationary-source noise and operational traffic noise. Additionally, State Parks has its own law enforcement in the form of State Park Peace Officers who are California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These Peace Officers patrol State Parks and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. These sections prohibit noise that disturbs others in sleeping quarters between 10 PM and 6 AM, use of outside machinery or electronic equipment at any time which is likely to disturb others, and state that electric generators are prohibited between the hours of 8 PM and 10 AM. Adherence to the State Parks quiet hours and enforcement of the CCR Peace and Quiet section by State Park Peace Officers would limit the potential for noise disturbances during more sensitive nighttime hours.
- I6-7 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.” Furthermore, after flood events, State Parks would remove flood debris from grasslands and flow through areas.
- I6-8 Please refer to “Fire Protection” in Section 3.4.2 of the EIR and Response to Comment L1-9.
- I6-9 Please refer to Common Response 8, “Safety of Facilities During Flood Events.”
- I6-10 The speed limit for River Road in Table 4.1-2 of the EIR has been corrected to reflect a 55 mile per hour (mph) speed limit rather than 35 mph. The modeled existing and existing plus project traffic noise levels along River Road at a 55 mph speed limit would not exceed Butte County’s 60 dBA L_{dn} standard at any noise-sensitive receptors.
- I6-11 Please refer to response to Comment L1-60.
- I6-12 Hunting is not, and will not be, allowed in BSRSP, including on the Singh Unit or Nicolaus property. Hunting is allowed on the CDFG property adjacent to the project site; this is an existing condition that will not change due to the proposed project. All hunting on CDFG land is subject to Fish and Game laws and wildlife regulations and will continue at the discretion of CDFG. State Parks does not have control over hunting regulations on CDFG lands.
- I6-13 Poison oak is a native plant species commonly found in riparian habitats; it is appropriate for inclusion in the revegetation plans for the project site to meet the ecological goals. Public concern regarding poison oak as a public health hazard will be considered by decision makers.
- I6-14 In response to agency and neighbor’s comments on the Draft EIR, the recreation plans have been revised to remove RV campgrounds (see Appendix D of this EIR). That area of the Nicolaus property would instead be restored to oak savannah habitat.

- I6-15 Please refer to Common Response 3, “Adequacy of CEQA Document,” and Sections 1.3 and 4.1 of the EIR.
- I6-16 The Sacramento River Reclamation District has been added to the list of “Other Interested Agencies” in Section 1.7.3 of the EIR.
- I6-17 Please refer to Common Response 2, “Adequacy of CEQA Public Noticing.”
- I6-18 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- I6-19 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- I6-20 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis,” and Section 4.3 of the EIR.
- I6-21 Please refer to Appendix C of this EIR for the revised Riparian Habitat Restoration Plans for both the Nicolaus property and the Singh Unit. The proposed habitat types, plant lists, and planting densities are provided in the plans.
- I6-22 The proposed project would not include nor require a wastewater treatment plant. As described in Chapter 3, the existing septic system/leachfield would be used to service the relocated BSRSP headquarters (at the Nicolaus farm complex) and a new septic system/leachfield would be installed to service the combination restroom/shower building for the campground (in an area where annual flooding is not anticipated). The vault toilets would be sealed when necessary and would be pumped by a local contractor.
- In terms of potable water, the domestic water well on the Nicolaus property would continue to be used to serve the BSRSP headquarters (relocated to be in the farm buildings) and the recreational facilities on the Nicolaus property. An on-site water treatment facility would be installed to maintain acceptable water quality levels from this domestic groundwater well as regulated by the State Division of Drinking Water.
- I6-23 Please refer to Common Response 2, “Adequacy of CEQA Public Noticing.”
- I6-24 As explained in Section 4.2, “Socioeconomic Considerations,” of this EIR, the CEQA Guidelines provide that “economic or social information may be included in an EIR or may be presented in whatever form the agency desires” but that “economic or social effects of a project shall not be treated as significant effects on the environment.” (CEQA Guidelines Section 15131. Emphasis added). Therefore, while social and economic consequences are not in of themselves environmental impacts under CEQA, Section 4.2 discusses socioeconomic considerations related to agricultural production resulting from implementation of the proposed project.
- Combined, the Singh Unit and Nicolaus property represent a total of 189 acres of designated Irrigated Farmland (see Section 4.2.1 of the EIR). Of this amount, a total of 170 acres are currently planted in walnuts and almonds. If this total acreage was removed from production for native vegetation restoration or rural outdoor recreation uses, it would constitute a very small portion of total agricultural lands in walnut and almond production in Butte County (approximately 0.2% of Butte County’s almond and walnut orchards and approximately 0.04% of land in agricultural production). Reducing agricultural production value by this proportion would have a minor, if not unnoticeable, economic effect in the county. The cessation of agricultural production can also cause an indirect economic ripple effect on secondary service and supply businesses supporting agriculture. However, because of the small relative contribution of the

project site to agricultural production in the county, the combined direct and indirect economic effect of removing agricultural production from these lands would be minor.

- I6-25 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis,” and Section 4.3 of the EIR.
- I6-26 The text in Section 3.4.2, “Public Access and Recreation Facilities,” Section 4.1, “Utilities and Public Services,” and Impact 4.3-e, “Change in Water Demand and Available Water Supply,” of the EIR has been edited to reflect the following:
- The Singh Unit has one groundwater well with a current capacity of approximately 500 gallons per minute (Luster 2007). There are five groundwater wells on the Nicolaus property. Four of the wells are intended for agricultural use; however, only one of the agricultural wells (located in the north-central part of the property) is used to water the entire orchard. This well has a current capacity of approximately 1,800-2,000 gallons per minute (Luster 2007). The other three agricultural wells are drilled and cased and could be functional, although they do not currently have pumps or motors. The fifth well is the existing domestic water source, with a capacity of approximately 25 gallons per minute, which is located adjacent to the existing farm house. This domestic water well would continue to be used to provide potable water to the BSRSP headquarters (relocated to be in the farm buildings) and the recreational facilities on the Nicolaus property. An onsite water treatment facility would be installed to maintain acceptable water quality levels from this domestic groundwater well as regulated by the State Division of Drinking Water.
- I6-27 Please refer to response to Comment L1-9.
- I6-28 Please refer to Common Response 7, “Buffer Zones.”
- I6-29 The historical east-west swale on the Singh Unit will not be restored. Per the design guidelines for the Mud Creek flood protection system developed by the U.S. Army Corps of Engineers, the swale was purposefully filled in around 1964-1965 as part of the Mud Creek flood control system.
- I6-30 Please refer to Common Response 7, “Buffer Zones.”
- I6-31 State parks is committed to being a good neighbor. State Parks has made changes to the proposed project in response to comments from agencies and members of the public. Project changes include providing for a north-south aligned swale on the westerly portion of the Singh Unit; removal of the RV campsites; reducing the density of trees to be planted in the habitat restoration areas; and realignment of the entry/exit to the day use area on River Road. As stated in Chapter 1 of the EIR, the project would be consistent with Goal AO-4 of the Park Plan and State Parks will continue to work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership pattern in the area.
- I6-32 Please refer to Common Response 7, “Buffer Zones.”
- I6-33 Please refer to Common Response 2, “Adequacy of CEQA Public Noticing.”
- I6-34 The comments provided during the Public Hearing for this project, held on February 19, 2008, are summarized in “Public Hearing Comments on the Draft EIR and the Project” provided below, and responded to in responses PH-1 through PH-20.
- I6-35 A copy of the Final EIR, including responses to comments, will be sent to the commenter.

Comment Form

Public Meeting – February 19, 2008

Draft Environmental Impact Report
Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities
development Project

Comment _____

See attached

Regarding property of Laura Mendonca

Send comments by March 17, 2008 to:

Denise Reichenberg

Sector Superintendent

CA Department of Parks and Recreation Northern Buttes District/Valley Sector

525 Esplanade

Chico, CA 95926

(530) 895-4304

*PER PHONE CALL 3/19/08
CONFIRMED COMMENT IS
FROM LARRY MENDONCA*

Mendonca Family Request and Comments regarding property owned by Laura Mendonca
Dated: 3/17/08

Survey property line between the Singh property on the north, and the Mendonca property on the south, by a private independent firm. Survey has been asked for on numerous occasions, since the purchase of the Singh property.	17-1
Put in a set-back of 300'-500' once property line is established. This was asked of the State as a consideration. The plan only states 100', this is insufficient. County regulations is 300'. State parks to maintain set back and keep free of any trees and debris.	17-2
Water hydrology report to be done on Mud Creek, Rock Creek/Kusal Slough, Lindo Channel, Chico Creek to include all water flows to properties within scope of the DEIR. Without this the DEIR is incomplete.	17-3
Remove berm on river front (west side) of Singh property which will allow water flow not to be directed onto Mendonca property causing further erosion.	17-4
Remove berms on Mud Creek.	17-5
Clean out drain slough allowing water to drain to Chico Creek.	17-6
Once walnut trees removed from Singh property, put into open grassland only, as to not restrict water flow, water therefore will not be directed onto Mendonca property. Mendonca property is open land used for crop farming (seasonal farming). During heavy rains, land is open ground, without vegetation.	17-7
Issues of dealing with a campground in a high flood area have not been sufficiently addressed, especially regarding sewage during high water.	17-8
Other issues of increased police and fire protection have not been adequately addressed with limited county resources.	17-9
Traffic and road management have not been mentioned. A large campground is part of the State Parks plan to include spaces for large RV's. The road way in front of the Singh and Mendonca property is not large enough to address RV's usage. County has been stalled for years in their effort to repair the damage to the road near what is called the 'washout'.	17-10
Mendonca family need something in writing promising that spraying, burning, diesel irrigation pump noise or noise from any farming equipment will not be in conflict with proposed State River Park and said usage.	17-11

- I7-1 The boundaries between the project site, which would be part of State Park’s BSRSP, and private property would be clearly posted, consistent with Guideline AO-1.1-2 and AO-4.4-1 of the Park Plan. The northern boundary of the Singh Unit and the four corners (NW, NE, SW, SE) of Nicolaus property have been surveyed and marked (April 2008). The survey plat has been recorded with Butte County. State Parks would post “Park Boundary” signs as well as “No Trespass” signs along the project site boundaries with private lands. State Parks plans on locking the gate at the proposed day use area (located at the current site of the BSRSP headquarters on River Road) from sunset to sunrise. Additionally, State Parks will consider additional measures to prevent trespass such as appropriate fencing or natural barriers, subject to regulatory approval.
- I7-2 Please refer to Common Response 7, “Buffer Zones.”
- I7-3 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- I7-4 The comment asks about removal of a berm on the west side of the Singh Unit. However, there is no berm on the west side of the Singh Unit. Rather, there is a berm on the east side of the Singh Unit adjacent to Mud Creek and a berm at the southwest corner of the Unit, as illustrated in Exhibit 3-7 of this EIR. Both of these berms are proposed to be removed as part of the project. The restoration plans are discussed in detail in Appendix C of this EIR.
- I7-5 See response to Comment I7-4, above.
- I7-6 In response to discussions with the commenter, State Parks revised the restoration plans for the Singh Unit prior to publication of the Draft EIR to include a north-south oriented grassy swale in the western portion of the Singh Unit. This swale is reflected in the proposed habitat restoration plans discussed in Chapter 3 of the EIR, illustrated in Exhibits 3-7 and 3-8 of the EIR, and discussed in greater detail in Appendix C of the EIR.
- I7-7 The project-related impacts to flood hydrology, geomorphic processes, temporary and long-term water quality, and water supply are addressed in Impacts 4.3-a through 4.3-e of the EIR. With the implementation of Mitigation Measure 4.3-c, acquisition of appropriate regulatory permits and implementation of a storm water pollution prevention plan and best management practices, the project would result in less than significant impacts to flood hydrology, geomorphic processes, water quality, and water supply. The hydraulic modeling supporting the impact analysis is provided in Appendix B of the Draft EIR. The hydraulic modeling was revised in response to comments on the Draft EIR; the revised modeling reinforced the determination that the project would result in less-than-significant impacts to the flood levels and velocities in the project area. Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis,” for more information regarding the revised hydraulic analysis and its results. In addition, please refer to response to Comment L3-2, above.
- I7-8 Please refer to Common Response 8, “Safety of Facilities During Flood Events.”
- I7-9 Please refer to response to Comment L1-9.

- I7-10 The Recreation Facilities Plan for the project has been revised, as shown in Appendix D of this EIR, to remove RV campgrounds from the proposed project. Because the project would no longer provide RV campgrounds, it is assumed that the project would not result in a significant increase in RVs traveling on River Road.
- I7-11 State parks is committed to being a good neighbor. State Parks has made changes to the proposed project in response to comments from agencies and members of the public. Project changes include providing for a north-south aligned swale on the westerly portion of the Singh Unit; removal of the RV campsites; reducing the density of trees to be planted in the habitat restoration areas; and realignment of the entry/exit to the day use area on River Road. As stated in Chapter 1 of the EIR, the project would be consistent with Goal AO-4 of the Park Plan and State Parks will continue to work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership pattern in the area.

PUBLIC HEARING

COMMENTS ON THE DRAFT EIR AND THE PROJECT

Comment Number	Comment
1	The proposed grassland buffers in the habitat restoration plans, between restored areas and adjacent private agricultural lands, should be greater than 100 feet. The adjacent private land owners feel the buffer should be at least 300–500 feet.
2	What parameters and data were used in the Hydraulic Model? Neighboring land owners are concerned that the model did not adequately account for flood flows from Mudd Creek, Rock Creek, and Big Chico Creek, and that it focused incorrectly on only Sacramento River flood flows.
3	Why does the Hydraulic Model show changes in flood level and velocity only in certain locations?
4	What is the rate of drainage of flood waters?
5	Why is the site on River Road (the current BSRSP headquarters location) going to be used as a day-use area when it is directly across from a private residence?
6	There is a diesel pump approximately 35 feet from the existing BSRSP headquarters site that is proposed to be used for a day-use area.
7	Will the day use area be gated and locked nightly?
8	The U.S. Army Corps of Engineers has plans for Mudd Creek, which calls for overflow onto agricultural land and then let it slowly drain to the Sacramento River. The proposed project would affect this plan.
9	The topographic maps indicate there was a swale running east-west on the Singh Unit. Will that be restored?
10	Cancellation of the Williamson Act contract on the Nicolaus property undermines the Williamson Act and is a significant effect related to the loss of agricultural resources.
11	Neighboring land owner is concerned that the change of vegetation from orchards to riparian habitat will result in denser vegetation and will therefore backup water onto adjacent properties.
12	How will State Parks handle/maintain flood debris during and after floods?
13	Neighboring land owners are concerned that noise from agricultural operations will result in disturbances to park visitors, which will then complain. The land owners are concerned that this could result in some detrimental effect on their ability to continue agricultural operations.
14	Why does the project propose putting campsites on the Nicolaus property at this time?
15	The EIR needs to address potential effects of the project to land that is east of Mudd Creek.
16	Are the alternatives analyzed in the EIR adequate? Are there alternatives to converting agricultural land to recreational facilities?)
17	Will the project sites be fenced? The adjacent private land owners would like a fence to discourage trespassing and make the park boundary clear, but want to ensure that the fence is designed to not capture or back up debris during flood events.
18	Neighboring private land owners are concerned about pests and invasive species negatively impacting their agricultural production (such as black walnut volunteers bringing walnut husk fly, squirrels and rodents, deer, mosquitoes, and beaver). Neighbors state that they may need to use additional pesticides due to the proposed project.
19	Neighboring private land owners are concerned about people trespassing on their properties from the project sites.
20	How will the restrooms and dump station be designed to avoid leaking and contaminating adjacent properties, especially during flood events?
21	Who makes the final decision to approve or deny the project?

PH
Response

**Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation
Facilities Development Project
Draft EIR Public Hearing
Verbal Comments Received February 19, 2008**

- PH-1 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and Common Response 7, “Buffer Zones.”
- PH-2 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- PH-3 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- PH-4 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”
- PH-5 The proposed day use area, located west of River Road, across from the residence north of the Nicolaus parcel, would replace the existing BSRSP headquarters and day use area. In response to comments on the Draft EIR, the revised Conceptual Public Access and Recreation Plan (see Appendix D of this EIR) now includes only one point of entry/exit off of River Road, which is off-set from the driveway to residence across River Road, and vegetation would be planted along River Road to provide a vegetative buffer between the day use area and the road. Use of the day use area is not expected to substantially increase in comparison to the existing use, because the headquarters offices will be moved from that site to the farm complex on the Nicolaus property and the parking capacity would not substantially increase. Furthermore, the hours of operation for the day use area would be restricted from sunset to sunrise and the entry/exit to the area would be gated.
- PH-6 Commented noted that a new pump for an existing groundwater well will be installed across River Road from the existing BSRSP headquarters and day use site.
- PH-7 State Parks will lock the gate at the day use area, located at the site of the current BSRSP Headquarters on River Road, between sunset and sunrise.
- PH-8 Please refer to response to Comment L3-3.
- PH-9 The historical east-west swale on the Singh Unit will not be restored. Per the design guidelines for the Mud Creek flood protection system developed by the U.S. Army Corps of Engineers, the swale was purposefully filled in around 1964-1965 as part of the Mud Creek flood control system.
- PH-10 Please refer to Common Response 5, “Impacts to Lands Under Williamson Act Contract.”
- PH-11 The project-related impacts to flood hydrology, geomorphic processes, temporary and long-term water quality, and water supply are addressed in Impacts 4.3-a through 4.3-e of the EIR. With the implementation of Mitigation Measure 4.3-c, acquisition of appropriate regulatory permits and implementation of a storm water pollution prevention plan and best management practices, the project would result in less than significant impacts to flood hydrology, geomorphic processes, water quality, and water supply. The hydraulic modeling supporting the impact analysis is provided in Appendix B of the Draft EIR. The hydraulic modeling was revised in response to comments on the Draft EIR; the revised modeling reinforced the determination that the project would result in less-than-significant impacts to the flood levels and velocities in the project area. Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis,” for more information regarding the revised hydraulic analysis and its results.

- PH-12 State Parks will remove flood debris from grasslands and from flow through areas after flood events.
- PH-13 Please refer to Common Response 4, “Impacts to Agricultural Operations.”
- PH-14 Please refer to Common Response 1, “Opposition to the Proposed Project.”
- PH-15 Please refer to Common Response 6, “Revised Flood Neutral Hydraulic Analysis.”

PH-16 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 Final 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. State CEQA Guidelines Section 15126.6(d)(2) state that if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. Alternatives considered in this Final EIR include the proposed project, the no project alternative, and the passive restoration alternative.

The no project alternative would not meet the project objectives to restore natural topography and vegetation or increase public access and outdoor recreation opportunities at BSRSP and would not provide the biological benefits that would be provided by the other two alternatives.

The proposed project is the environmentally superior alternative of the alternatives considered. Under the proposed project, native species would be planted and actively maintained for 3 years to allow the planted vegetation to become established. The planned maintenance program includes irrigation and weed control to allow root systems to mature to the depth of the water table and to eliminate or control weeds that could interfere with the establishment of native plants. The proposed project would provide the best balance between avoiding environmental impacts and achieving the project objectives. No significant increases in flood risks would result from any of the alternatives considered. Although some impacts associated with the proposed project would be avoided by the passive restoration alternative, those impacts would be reduced to a less-than-significant level under the proposed project with the incorporation of mitigation. In addition, the proposed project would provide greater benefits to biological and recreational resources than the no project or passive restoration alternatives.

PH-17 The boundaries between the project site, which would be part of State Park’s BSRSP, and private property would be clearly posted, consistent with Guideline AO-1.1-2 and AO-4.4-1 of the Park Plan. The northern boundary of the Singh Unit and the four corners (NW, NE, SW, SE) of Nicolaus property have been surveyed and marked (April 2008). The survey plat has been recorded with Butte County. State Parks would post “Park Boundary” signs as well as “No Trespass” signs along the project site boundaries with private lands. State Parks plans on locking the gate at the proposed day use area (located at the current site of the BSRSP headquarters on River Road) from sunset to sunrise. Additionally, State Parks will consider additional measures to prevent trespass such as appropriate fencing or natural barriers, subject to regulatory approval.

Furthermore, please refer to “Law Enforcement” in Section 3.4.2 of the EIR. Public safety and emergency services are the primary responsibility of the State Park Peace Officers who are

California Penal Code 830.2(f) and have full law enforcement authority in the State of California. These Peace Officers patrol State Parks and enforce California Code of Regulations Section 4320 (a), (b), and (c) Peace and Quiet. Additionally, consistent with the Park Plan Goal AO-4.4, State Parks will work with private land owners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area.

- PH-18 Please refer to Common Response 4, “Impacts to Agricultural Operations,” and Common Response 7, “Buffer Zones.”
- PH-19 Please refer to response to comment PH-17, above.
- PH-20 Please refer to Common Response 8, “Safety of Facilities During Flood Events.”
- PH-21 Please refer to Section 1.5, “Agency Roles and Responsibilities,” of this Final EIR. State Parks is the lead agency for the project. State Parks has the principal responsibility for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the EIR public-review process is complete, the Director of State Parks is the party responsible for certifying that the EIR adequately evaluates the impacts of the project. The Director also has the authority to either approve or reject the project.

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10 REFERENCES

10.1 INTRODUCTION

California Department of Parks and Recreation. 2003. *Bidwell-Sacramento River State Park Preliminary General Plan and Draft Environmental Impact Report*. Sacramento, CA. Prepared by EDAW. Sacramento, CA.

California Department of Parks and Recreation. 2006. *Bidwell-Sacramento River State Park Comments and Responses to Comments on the Recirculated Draft Environmental Impact Report*. Sacramento, CA. Prepared by EDAW. Sacramento, CA.

CALFED Bay-Delta Program. 2000a (August 28). *Final Programmatic Environmental Impact Statement and Environmental Impact Report. Programmatic Record of Decision*. Sacramento, CA.

10.2 PROJECT DESCRIPTION

California Department of Forestry and Fire Protection (CAL FIRE). December 12, 2006. Butte County Draft Fire Hazard Severity Zoning Map. Available: <http://frap.cdf.ca.gov/webdata/maps/butte/fhsz_map.4.jpg>. Accessed August 5, 2008.

CAL FIRE. 2007. Fire Prevention, Wildland Hazard, Frequently Asked Questions. Fire Hazard Severity Zoning and Local Responsibility Areas. Available: <http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_faqs.php>. Accessed August 5, 2008.

10.3 EFFECTS FOUND NOT TO BE SIGNIFICANT

Tobias, K. August 6, 2008. — e-mail correspondence from Kathryn Tobias, State parks Legal Council, to Suzanne Enslow, EDAW, regarding fire protection at the project site.

10.24 AGRICULTURAL RESOURCES

American Farmland Trust. 2007. *Farming on the Edge*. Website: www.farmland.org. Accessed on October 18, 2007.

Brown, D. L. and D. M. Wood. 2002. *Measure Key Connections between the River and Floodplain*. Report to The Nature Conservancy. Available at <http://www.sacramentoriverportal.org>.

Butte County. 2007. *Butte County Agricultural Crop Report 2006*. Butte County Agriculture Commissioners Office. Oroville, CA.

Butte County. 2007. *Butte County General Plan*. Website: <http://www.buttecounty.net/dds/planning/>. Accessed October 15, 2007.

Butte County. 2007b (January). *Resolution 07-021 of the Board of Supervisors of the County of Butte: Butte County Administrative Procedures and Uniform Rules for Implementing the California Land Conservation (Williamson) Act*. Oroville, CA.

Butte County. 1995 (May 9). *Agricultural Element of the Butte County General Plan*. Oroville, CA.

Butte County. 1979 (October 30). *Land Use Element of the Butte County General Plan: Chico Area Greenline Policy*. Oroville, CA.

Butte County. 1981. Butte County Right to Farm Ordinance (Ord. No. 3965). Oroville, CA. County

CALFED Bay-Delta Program. 2000a (August 28). *Final Programmatic Environmental Impact Statement and Environmental Impact Report. Programmatic Record of Decision*. Sacramento, CA.

California Bay Delta Authority. 2005 (June). *Sacramento River-Chico Landing Subreach Habitat Restoration Project Draft EIR*.

California Department of Conservation. 2006 (May). *The California Land Conservation (Williamson) Act Status Report 2006*. Sacramento, CA.

California Department of Conservation. 1997. *California Agricultural Land Evaluation and Site Assessment Model, Instruction Manual*.

California Department of Conservation. 2007. *Important Farmland Categories*. Website: http://www.consrv.ca.gov/dlrp/FMMP/mccu/map_categories.htm. Accessed on October 9, 2007.

California Department of Fish and Game. 2004. *Comprehensive Management Plan for the Sacramento River Wildlife Area*. Sacramento, CA.

California Department of Parks and Recreation. 2003. *Bidwell-Sacramento River State Park Preliminary General Plan and Draft Environmental Impact Report*. Sacramento, CA. Prepared by EDAW. Sacramento, CA.

California Department of Parks and Recreation. 2005. *State Parks (October). Bidwell-Sacramento River State Park Recirculated DEIR (Agricultural Resources)*. Prepared by EDAW. Sacramento, CA.

California Department of Parks and Recreation. 2006. *Bidwell-Sacramento River State Park Comments and Responses to Comments on the Recirculated Draft Environmental Impact Report*. Sacramento, CA. Prepared by EDAW. Sacramento, CA.

Cannon, Tina R. 2004. *Farmland Conversion: Should Habitat "Mitigate" to Agribusiness*. Association of Environmental Professionals Environmental Monitor (Summer).

CDBA. *See* California Bay Delta Authority.

City of Sacramento. 2003. *Natomas Basin Habitat Conservation Plan; Sacramento and Sutter Counties, California*. Sacramento, CA.

DFG. *See* California Department of Fish and Game.

DOC. *See* California Department of Conservation.

DPR 2007 (January). California State Parks' Central Valley Vision Summary Report: Findings and Recommendations. Sacramento, CA.

EDAW. 2007. *Colusa Subreach Planning Pest and Regulatory Effects Study Public Draft Report*. Prepared for The Nature Conservancy. November.

Kuminoff, Nicolai V.; Sokolow, Alvin D.; and Sumner, Daniel A. 2001 (May). *Farmland Conversion: Perceptions and Realities*. Agricultural Issues Center Issues Brief No. 16, University of California.

Natural Resources Conservation Service. 1983 (October). *Form AD-1006, Farmland Conversion Impact Rating*.

NRCS. *See* Natural Resources Conservation Service.

QUAD Consultants, Brown-Buntin Associates, Inc., and Dowling Associates. 1993 (June). *Glenn County General Plan, Vol I through IV*. Prepared for the Glenn County Board of Supervisors.

State Parks. *See* California Department of Parks and Recreation.

The Nature Conservancy. ~~2007-2008 (August)~~ April. *Riparian Habitat Restoration Plan for Nicolaus Property Sacramento River (RM 195)*. Prepared for California Department of Parks and Recreation Bidwell-Sacramento River State Park.

The Nature Conservancy. ~~2007-2008 (December)~~ April. *Riparian Habitat Restoration Plan for Singh Unit Sacramento River (RM 194)*. Prepared for California Department of Parks and Recreation Bidwell-Sacramento River State Park.

TNC. *See* The Nature Conservancy.

U.S. Fish and Wildlife Service. 2005. *Comprehensive Conservation Plan for the Sacramento River National Wildlife Refuge*. Sacramento, CA.

USFWS. *See* U.S. Fish and Wildlife Service.

10.35 HYDROLOGY, WATER QUALITY, AND RIVER GEOMORPHOLOGY

Akers, J. November 29, 2007—email correspondence from Joseph Akers, California State Parks PMC, to Suzanne Enslow, EDAW, regarding Bidwell-Sacramento River State Park flood protection practices.

Ayres Associates. ~~2008~~ 7. *Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties; Sacramento River, RM 194–195*. ~~December 2007~~ May 30, 2008. Prepared for The Nature Conservancy.

Bailey, E. H. 1966. *Geology of Northern California. Bulletin 190*. California Division of Mines and Geology. Sacramento, CA.

Begg, E. 1968. *Soil Survey of Glenn County, California*. United States Department of Agriculture, Soil Conservation Service.

CALFED Bay–Delta Program. 2000 (July). *Final Programmatic Environmental Impact Statement and Environmental Impact Report*. Including portions of the Ecosystem Restoration Program Plan. Including the Multi-Species Conservation Strategy, Technical Appendix. Sacramento, CA.

California Department of Fish and Game. 2000. *Water Quality Criteria for Diazinon and Chlorpyrifos*. Office of Spill Prevention and Response. Administrative Report 00-3.

California Department of Water Resources. 1994. *Bulletin 160-93 - The California Water Plan Update* Available: <<http://rubicon.water.ca.gov/b160index.html>>. Last updated March 13, 2000. Accessed February 28, 2005.

California Department of Water Resources. 2005. California Department of Water Resources, Division of Flood Management, River Stage and Flow Information. Available <<http://cdec.water.ca.gov/river/upsacto2Stages.html>> and <<http://cdec.water.ca.gov/river/upsacto3Stages.html>>. Accessed April 8, 2005.

CDFG. *See* California Department of Fish and Game.

- Central Valley Water Board (formerly called the Central Valley RWQCB). 2002. *2002 CWA Section 303(d) List of Water Quality Limited Segments*, Central Valley Regional Water Quality Control Board. Approved by U.S. Environmental Protection Agency, July 2003. Available: <<http://www.swrcb.ca.gov/tmdl/docs/2002reg5303dlist.pdf>>. Accessed February 17, 2005.
- DWR. *See* California Department of Water Resources.
- Gowans, K. D. 1967. *Soil Survey: Tehama Valley, California*. U.S. Department of Agriculture Soil Conservation Service. U.S. Government Printing Office. Washington, DC.
- Jennings, C. W. and R. G. Strand. 1960. *Geologic Map of California, Ukiah sheet*. O. P. Jenkins Edition. Third Printing. Scale 1:250,000. California Division of Mines and Geology. Sacramento, CA.
- Kelly, R. 1989. *Battling the Inland Sea: American Political Culture, Public Policy, and the Sacramento Valley 1850–1896*. Berkeley: University of California Press. Berkeley, CA.
- Larsen, E. Anderson, E., Avery, E., Krishna, D. 2002. The controls and evolution of channel morphology of the Sacramento River: A case study of River Miles 201–185.
- Luster, R. February 3, 2005—telephone conversation with Ron Unger, Jeff Lafer, and Chris Fitzer of EDAW regarding current levee maintenance practices in project area and project elements.
- Luster, R. November 2007—telephone conversation between Ryan Luster, TNC, and Suzanne Enslow, EDAW, regarding the capacity of the two groundwater wells in the project site.
- Micheli, E. R., J. W. Kirchner and E. W. Larsen. 2004. *Quantifying the Effect of Riparian Forest Versus Agricultural Vegetation on River Meander Migration Rates, Central Sacramento River, CA*. *River Research and Applications* 20: 537–548.
- RWQCB. *See* Central Valley Water Board.
- Sacramento River Conservation Area Forum. 2003 (September). Revised and updated by the Sacramento River Conservation Area Forum. Red Bluff, CA. Prepared for the Resources Agency under Senate Bill 1086, authored by Senator Jim Nielsen.
- Saucedo, G. J., and Wagner, D. L. 1992. *Geologic Map of the Chico Quadrangle, Scale 1:2250,000*. California Division of Mines and Geology Regional Geologic Map Series No. 7A, Sacramento, CA.
- Sommer, T. R., Nobriga, M. L., Harrel, W. Batham, Kimmerer, W. J. 2001. Floodplain rearing of juvenile Chinook salmon: evidence of enhanced growth and survival. *Canadian Journal of Fisheries and Aquatic Sciences* 58(2):325–333.
- SRCA. *See* Sacramento River Conservation Area Forum.
- Strand, R. G. 1962. *Geologic Map of California, Redding Sheet*. O. P. Jenkins Edition. Fourth Printing. Scale 1:250,000. California Division of Mines and Geology. Sacramento, CA.
- The Nature Conservancy. 2001. *Modern Soil Survey Information for Butte County*. Chico, CA.
- The Nature Conservancy. 2003a. *Management and Monitoring Recommendations for Floodplain Habitats of the Beehive Bend Subreach (RM 164–178)*, Sacramento River, CA. Chico, CA.

The Nature Conservancy. 2003b. *Management and Monitoring Recommendations for the Chico Landing Subreach Final Report*. Chico, CA.

TNC. See The Nature Conservancy

U.S. Army Corps of Engineers and State of California Reclamation Board. 2002 (December). *Sacramento and San Joaquin River Basins California Comprehensive Study*. Interim Report. Sacramento District, Corps of Engineers and The Reclamation Board, Sacramento, CA.

U.S. Army Corps of Engineers. 2000. Engineering and Design – Design and Construction of Levees. (EM 1110-2-1913.) April 30, 2000.

U.S. Geological Survey. 1977. Lateral Migration of the Middle Sacramento River, California. Water Resources Investigations No. 77-43. Prepared by James Brice. Menlo Park, California.

U.S. Geological Survey. 2000. *Water-Quality Assessment of the Sacramento River Basin, California: Water-Quality, Sediment and Tissue Chemistry, and Biological Data, 1995–1998*. Open-File Report 00-391. Sacramento, CA.

USACE. See U.S. Army Corps of Engineers.

Walker, Larry Associates. 2004 (May). *2002–2003 Annual Monitoring Report*. Prepared for the Sacramento River Watershed Program. Davis, CA.

Walker, Larry Associates. 2004 (May). *2002–2003 Annual Monitoring Report*. Prepared for the Sacramento River Watershed Program. Davis, CA.

10.46 BIOLOGICAL RESOURCES

Barnhart, R. A. 1986. *Species Profiles: Life Histories and Environmental Requirements of Coastal Fishes and Invertebrates (Pacific Southwest) - Steelhead*. (Biological Report 82[11.60], TR EL-82-4.) Prepared for U.S. Fish and Wildlife Service, Washington, DC, and the U.S. Army Corps of Engineers, Vicksburg, MS.

Baxter, R. D. 1999. *Status of Splittail in California*. California Fish and Game 85(1):28–30.

Bombay, H. L., T. M. Ritter, and B. E. Valentine. 2000. *A Willow Flycatcher Survey Protocol for California*. U.S. Department of Agriculture Forest Service, Pacific Southwest Region, Vallejo, CA.

Brown, Kurtis. 2006. Evidence of spawning by green sturgeon, *Acipenser medirostris*, in the upper Sacramento River, California. *Environmental Biology of Fishes* 79(3-4): 297–303.

Butte County. 1971. Butte County General Plan Conservation Element. Available:
<<http://www.buttecounty.net/dds/Planning/conserv.htm>> Accessed on December 3, 2007.

CALFED Bay–Delta Program. 2000 (July). *Final Programmatic Environmental Impact Statement and Environmental Impact Report*. Including portions of the Ecosystem Restoration Program Plan. Including the Multi-Species Conservation Strategy, Technical Appendix. Sacramento, CA.

California Bay-Delta Authority. 2005 (June). *Sacramento River–Chico Landing Subreach Habitat Restoration Project Draft Environmental Impact Report*. Prepared by EDAW, Sacramento, CA.

California Department of Fish and Game. 1983. *California Wildlife Habitat Relationships System: California's Wildlife, Mammals, Ringtail*.

- California Department of Fish and Game. 1998. *A Status Review of the Spring-Run Chinook Salmon (Oncorhynchus tshawytscha) in the Sacramento River Drainage*. Fish and Game Commission. Sacramento, CA.
- California Department of Fish and Game. 2003. *Comprehensive Management Plan for the Sacramento River Wildlife Area*.
- California Department of Food and Agriculture. 2007. EncycloWeedia - Notes on Identification, Biology, and Management of Plants Defined as Noxious Weeds by California Law. Available: <http://www.cdfa.ca.gov/phpps/ipc/encycloveedia/encycloveedia_hp.htm>. Accessed September 2006.
- California Department of Parks and Recreation. 2003 (December). *Bidwell-Sacramento River Park General Plan and Draft Environmental Impact Report*. Prepared by EDAW, Sacramento, CA.
- California Department of Parks and Recreation. 2006. *California State Parks' Central Valley Vision*. Sacramento, CA.
- California Department of Parks and Recreation. 2007 (August 31). *Riparian Habitat Restoration Plan for the Nicolaus Property Sacramento River (RM 195)*. Prepared by The Nature Conservancy, North Central Valley Office, Chico, CA.
- California Department of Parks and Recreation. 2007 (December). *Riparian Habitat Restoration Plan for Singh Unit Sacramento River (RM 194)*. Prepared by The Nature Conservancy, North Central Valley Office, Chico, CA.
- California Invasive Plant Council. 2006 (February). California Invasive Plant Inventory. Cal-IPC Publication 2006-02. California Invasive Plant Council: Berkeley, CA. Available: <www.cal-ipc.org>.
- California Native Plant Society. 2007 (April). Electronic Inventory of Rare and Endangered Vascular Plants of California. Available: <<http://northcoast.com/~cnps/cgi-bin/cnps/sensinv.cgi>>. Accessed June 15, 2007.
- California Natural Diversity Data Base (CNDDB). 2007 (March). *Database Search for Sensitive Biological Resources*. California Department of Fish and Game, Biogeographic Data Branch. Sacramento, CA. Accessed June 15, 2007.
- Cal-IPC. *See* California Invasive Plant Council.
- Cdfa. *See* California Department of Food and Agriculture.
- City of Sacramento, Sutter County, and The Natomas Basin Conservancy. 2003. *Final Natomas Basin Habitat Conservation Plan*. Sacramento, CA.
- CNDDB. *See* California Natural Diversity Database.
- CNPS. *See* California Native Plant Society.
- DFG. *See* California Department of Fish and Game.
- DPR. *See* California Department of Parks and Recreation.
- Elliott, W. 2002. District Resource Ecologist. *California Department of Parks and Recreation, Northern Buttes District, Oroville, CA*. October–December 2002—telephone and email discussions with Anne King of EDAW regarding special-status species occurrences in Bidwell-Sacramento River State Park.

- Fitzgerald, Kelly. Fish and Wildlife Biologist. U.S. Fish and Wildlife Service. Sacramento, CA. April 21, 2005—email to Jenny Marr of California Department of Fish and Game regarding new giant garter snake record.
- Gardali, T., A. L. Holmes, S. L. Small, N. Nur, G. R. Geupel, and G. H. Golet. 2006. *Abundance Patterns of Landbirds in Restored and Remnant Riparian Forests on the Sacramento River, California, U.S.A.* Restoration Ecology 14:391–403.
- Gilchrist, J., S. S. Small, and G. R. Geupel. 2002. *Riparian Birds in the Sacramento Valley: a Draft Summary of the 2002 Field Season.* Prepared by PRBO Conservation Science. Stinson, Beach, CA.
- Hansen, Eric. Consulting environmental biologist specializing in Giant Garter Snakes. December 6, 2006—email correspondence with Kristen Strohm of EDAW confirming that giant garter snakes are unlikely to occur between the flood control levees of the Sacramento River.
- Hansen, G. E. and J. M. Brode. 1993. *Results of Relocating Canal Habitat of the Giant Garter Snake (Thamnophis gigas) During Widening of State Route 99/70 in Sacramento and Sutter Counties, California.* Final report for Caltrans Interagency Agreement 03E325 (FG7550) (FY 87/88-91-92). Cited in USFWS 1999b.
- Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Unpublished document, California Department of Fish and Game Natural Heritage Division, Sacramento, CA.
- Holyoak, Marcel. Professor, Department of Environmental Science and Policy, University of California, Davis. July 6, 2007—e-mail conversation with Tracy Walker of EDAW regarding elderberry shrub growth in California.
- Hubbell, J. G., D. M. Wood, J. W. Hunt, and M. Quinn. 2003a (March). *Site Assessment for Riparian Restoration at the Sunset Ranch Unit.* Prepared by Department of Biological Sciences, California State University, Chico. Chico, CA. Prepared for The Nature Conservancy.
- Hubbell, J. G., D. M. Wood, J. W. Hunt, and M. Quinn. 2003b (March). *Site Assessment for Riparian Restoration at the Deadman's Reach Unit.* Prepared by Department of Biological Sciences, California State University, Chico. Chico, CA. Prepared for The Nature Conservancy.
- Jones & Stokes Associates. 1999. *Use of Floodplain Habitat of the Sacramento and American Rivers by Juvenile Chinook Salmon and Other Fish Species.* Prepared for Sacramento Area Flood Control Agency. Sacramento, CA.
- Kjelson, M. J., P. F. Raquel, and F. W. Fisher. 1982. *Life History of Fall-run Chinook Salmon (Oncorhynchus tshawytscha) in the Sacramento-San Joaquin Estuary, California.* In: Estuarine Comparisons, edition 7. U. S. Kennedy (editor), Academic Press, New York. Pp. 393–411.
- Kohlhorst, D. W., L. W. Botsford, J. S. Brennan, and G. M. Cailliet. 1991. *Aspects of the Structure and Dynamics of an Exploited Central California Population of White Sturgeon (Acipenser transmontanus).* In: P., Williot (ed.), Acipenser: Acts of the First International Sturgeon Symposium. October 3–6, 1989. Bordeaux, France, Cemagref-Dicova. Pp. 277–293.
- Laymon, S. A., P. L. Williams, and M. D. Halterman. 1997. *Breeding Status of the Yellow-Billed Cuckoo in the South Fork Kern River Valley, Kern County, California: Summary Report 1985–1996.* A report of the Kern River Research Center, Weldon, CA.

- Luster, R. Program Manager/Restoration and Agriculture, The Nature Conservancy, Chico, CA. December 13, 2004—email transmission to Ron Unger of EDAW in response to questions about the Sacramento River–Chico Landing Subreach habitat restoration project description.
- Manolis, T. 1998. Breeding Bird Census. Submitted to Bidwell-Sacramento River State Park.
- Maslin, P. M. Lennox, and J. Kindopp. 1998 Update. *Intermittent Streams as Rearing Habitat for Sacramento River Chinook Salmon* (*Oncorhynchus tshawytscha*). California State University, Chico.
- Maslin, P., M. Lennox, J. Kindopp, and W. McKinney. 1997. *Intermittent Streams as Rearing Habitat for Sacramento River Chinook Salmon* (*Oncorhynchus tshawytscha*). California State University, Chico, CA.
- McEwan, D. and T. A. Jackson. 1996. *Steelhead Restoration and Management Plan for California*. California Department of Fish and Game, Inland Fisheries Division. Sacramento, CA.
- Moyle, P. B. 2002. *Inland Fishes of California*. University of California Press. Berkeley, CA.
- Moyle, P. B., P. J. Foley, and R. M. Yoshiyama. 1992. *Status of Green Sturgeon, Acipenser medirostris, in California*. Final Report submitted to National Marine Fisheries Service. University of California, Davis. Davis, CA.
- Moyle, P. B., J. E. Williams, and E. D. Wikramanayoke. 1989. *Fish Species of Special Concern of California*. California Department of Fish and Game. Rancho Cordova, CA.
- Office of Habitat Conservation. 1999. Essential Fish Habitat Consultation Guidance. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Habitat Conservation, Silver Spring, MD. November 1999.
- Point Reyes Bird Observatory. 2002. *Riparian Bird Communities in the Sacramento Valley: A Report of the 2001 Field Season*.
- PRBO. *See* Point Reyes Bird Observatory.
- Reynolds, F. L., T. Mills, R. Benthin, and A. Low. 1993. *Central Valley Anadromous Fisheries and Associated Riparian and Wetlands Areas Protection and Restoration Action Plan*. Draft. California Department of Fish and Game, Inland Fisheries Division. Sacramento, CA.
- Sacramento River Conservation Area Forum. 2002 (June). *Sacramento River Conservation Area Handbook*. Red Bluff, CA.
- Sawyer, J. O. and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society. Sacramento, CA.
- Schaffter, R. G. 1980. *Fish Occurrence, Size, and Distribution in the Sacramento River near Hood, California, during 1973 and 1974*. (Administrative Report No. 80-3.) California Department of Fish and Game. Sacramento, CA.
- Silveira, J. Wildlife Biologist. SRNWR. April 2005—telephone conversation with Ryan Luster of TNC on the likelihood of burrowing owls occurring in the project area.
- Small, S. L., N. Nur, A. Black, G. R. Geupel, D. Humple, and G. Ballard. 2000. *Riparian Bird Populations of the Sacramento River System: Results from the 1993–1999 Field Seasons*. Point Reyes Bird Observatory. Stinson Beach, CA. Prepared for the Nature Conservancy, Chico, CA.

- Sommer, T. R. Baxter, and B. Herbold. 1997. *Resilience of Splittail in the Sacramento-San Joaquin Estuary*. Transactions of the American Fisheries Society 126:961–976.
- Swainson’s Hawk Technical Advisory Committee. 2000 (May). Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley. Available: <http://www.dfg.ca.gov/wildlife/species/docs/swain_proto.pdf>. Accessed October 16, 2007.
- Talley, Theresa S. Research biologist, Department of Environmental Science and Policy, University of California, Davis. July 6, 2007—e-mail conversation with Tracy Walker of EDAW regarding elderberry shrub growth in California.
- The Nature Conservancy. 1999 (October). *Draft Kaiser Property Baseline Assessment*. Part of the Sacramento River Project. Chico, CA.
- TNC. *See* The Nature Conservancy.
- U.S. Fish and Wildlife Service. 1984. *Valley Elderberry Longhorn Beetle Recovery Plan*. Portland, Oregon.
- U.S. Fish and Wildlife Service. 1992. *Use of Growth Data to Determine the Spatial and Temporal Distribution of Four Runs of Juvenile Chinook Salmon in the Sacramento River, CA*. USFWS Report No. AFF1-FRO-92-15.
- U.S. Fish and Wildlife Service. 1997. *Abundance and Survival of Juvenile Chinook Salmon in the Sacramento-San Joaquin River Estuary*. 1994 Annual Progress Report: Sacramento-San Joaquin Delta. California Department of Water Resources. Sacramento, CA.
- U.S. Fish and Wildlife Service. 1999a. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. Sacramento Fish and Wildlife Office. Sacramento. CA.
- U.S. Fish and Wildlife Service. 1999b. *Draft Recovery Plan for the Giant Garter Snake (Thamnophis gigas)*. U.S. Fish and Wildlife Service, Portland, Oregon.
- U.S. Fish and Wildlife Service. 2005a (July). *Comprehensive Conservation Plan and Environmental Assessment - Sacramento River National Wildlife Refuge*. California/Nevada Refuge Planning Office, Sacramento, CA.
- U.S. Fish and Wildlife Service. 2005b (June 15). Songbird missing from California’s Central Valley for 60 years reappears at San Joaquin River National Wildlife Refuge. Online news release. Available: <http://www.fws.gov/sacramento/ea/news_releases/>.
- U.S. Fish and Wildlife Service. 2006 (September). Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) 5-year Review: Summary and Evaluation. Sacramento, CA. Available: <<http://www.fws.gov/sacramento/>>.
- USFWS. *See* U.S. Fish and Wildlife Service.
- Vogel, D. A., and K. R. Marine. 1992. *An Assessment of the Appraisal Study of Options for Improving Fish Passage at Red Bluff Diversion Dam*. Red Bluff, CA.
- Wang, J. 1986. *Fishes of the Sacramento-San Joaquin Estuary and Adjacent Waters, California: A Guide to the Early Life Histories*. Berkeley Digital Library Project. Berkeley, CA.
- Waples, R. S. 1991. *Definition of “Species” under the Endangered Species Act: Application to Pacific Salmon*. U.S. Department of Commerce, NMFS Tech Memo. NMFS F/NWC – 194.

Wylie, G. and M. Cassaza. 2000. *Investigation of Giant Garter Snakes in the Natomas Basin: 1998–1999*. U.S. Geological Survey-Biological Resources Division, Dixon, CA. Cited in Natomas Basin Habitat Conservation Plan.

10.57 CULTURAL RESOURCES

Atchley, Sara. 2000. Cultural Resource Study for the Bidwell-Sacramento River Restoration Project, Butte County, California. Report on file at the Northeast California Information Center, CSU Chico.

Bayham, Frank E. and Keith L. Johnson. 1990. *Archeological Investigations at CA-GLE-105: A Multicomponent Site along the Sacramento River, Glenn County, California*. Prepared for U.S. Department of the Army Corps of Engineers, Sacramento District. By Archaeological Research Program, California State University, Chico.

Beardsley, Richard K. 1948. Cultural Sequences in Central California Archaeology. *American Antiquity*. 14(1):1–28.

Beck, Warren, Ynez Haas. 1974. *Historical Atlas of California*. University of Oklahoma Press. Norman and London.

Bryan, K. 1923. *Geology and Ground-Water Resources of Sacramento Valley, California*. U.S. Geological Survey Water-Supply Paper 495.

Butte County. 2006. Personal communication between Butte County Assessors Office and Angel Tomes, architectural historian with EDAW, October 2006.

Chartkoff, Joseph and Kerry Chartkoff. 1983. Excavations at the Patrick Site (4-Butte-1), in the Archaeology of Two Northern California Sites, *Monograph 22, Institute of Archaeology*. University of California, Los Angeles.

Deal, Krista C. 1987. *The Archaeology of the Cana Highway Site, CA-BUT-288, Butte County, California*. Masters Thesis on file at California State University, Chico.

Dixon, R. 1905. The Northern Maidu. *Bulletin of the American Museum of Natural History* 17(3):119–346.

Dreyer, William Ray. 1984. *Prehistoric Settlement Strategies in a Portion of the Northern Sacramento Valley, California*. Master Thesis on file at California State University, Chico.

EDAW. 2006. Cultural Resources Inventory and Assessment Singh and Nicolaus Restoration and Public Access Project. Prepared for the Nature Conservancy and California Department of Parks and Recreation. On file at EDAW, Inc, Sacramento.

Fredrickson, David A. 1974. Cultural Diversity in Early Central California: A view from the North Coast Ranges. *Journal of California Anthropology* 1 (1):41–54.

Hetherington. 1980. Archaeological Reconnaissance of the Bidwell River Park.

Hill, Dorothy. 1978. *The Indians of Chico Rancheria*. California Department of Parks and Recreation. Sacramento, CA.

Hinds, N. E. A. 1952. *Evolution of the California Landscape*. California Division of Mines Bulletin 158.

- Hood, Joe D. and Pamela McGuire. 1981. *Bidwell River Park Project (Chico Landing), A Partial Inventory of Cultural Features* Cultural Heritage Planning Section, California State Department of Parks and Recreation.
- Johnson, Keith L. 1975. *Archaeological Reconnaissance of 26 Erosion Sites along the Sacramento River, Chico Landing to Red Bluff, Butte, Glenn, and Tehama Counties, California.*
- Jones & Stokes. 1996. *Cultural Resources Inventory Report for the M&T Ranch/Parrott Pumping Plant and Fish Screen Project, Butte County, California.*
- Kowta, Mark. 1988. *The Archaeology and Prehistory of Plumas and Butte Counties, California: An Introduction and Interpretive Model.* Northeast Information Center, California State University, Chico.
- Kroeber, A. L. 1925. Handbook of the Indians of California. *Bureau of American Ethnology Bulletin* 78. Washington DC.
- Kroeber, A. L. 1932. The Patwin and Their Neighbors. *University of California Publications in Archaeology and Ethnology* 29(4):253–423. Berkeley.
- Larsen, Eric, Emily Anderson, Ellen Avery, and Krishna Dole. 2002. *The Controls on and Evolution of Channel Morphology of the Sacramento River: A Case Study of River Miles 201-185.* Report to the Nature Conservancy. Geology Department, University of California, Davis.
- Lillard, J. B., R. F. Heizer, and F. Fenenga. 1939. An Introduction to the Archaeology of Central California. Sacramento Junior College Department of Anthropology Bulletin 2, Sacramento.
- Maloney, Alice Bay editor. 1943. Fur Brigade to the Bonaventura: John Works's California Expedition of 1832–33 for the Hudson's Bay Company. *California Historical Society Quarterly* 22(3).
- . 1944. Fur Brigade to the Bonaventura: John Works's California Expedition of 1832–33 for the Hudson's Bay Company. *California Historical Society Quarterly* 23(1).
- Manning, James.P. 1983. Archaeological Survey of County Service Area No. 24. (LIC Report #B-L-574), on file at the Northeast California Information Center. CSU, Chico.
- McGowan, J. A. 1961. *History of the Sacramento Valley.* 3 vols. Lewis Hill Publishing Co. New York, N.Y.
- Moratto, Michael J. 1984. *California Archaeology.* Academic Press, Orlando.
- Nelson, N. C. 1907. Original Notes on Tehama-Red Bluff Mounds. Berkeley: University of California Archeological Survey Manuscripts #350.
- Olsen, William H., and Francis A. Riddell. 1963. The Archeology of the Western Pacific Railroad Relocation: Oroville Project, Butte County, California. *California State Department of Parks and Recreation, Archaeological Resources Section Report 7,* Sacramento.
- Peterson, D.P. 2002. The Development of an Alternative Restoration Strategy for Sacramento River Riparian Forests. MS Thesis. CSU Chico.
- Poland, J. F. and R. E. Evenson. 1966. Hydrogeology and Land Subsidence, Great Central Valley, California. In *Geology of Northern California. California Division of Mines and Geology Bulletin 190,* edited by E. H. Bailey, pp. 239–247.

- Riddell, F. 1978. Maidu and Konkow. In *Handbook of North American Indians Volume 8: California*. Edited by R. F. Heizer, pp. 370–386. Smithsonian Institute, Washington D.C.
- Ritter, Eric W. 1970. Northern Sierra Foothill Archaeology: Culture History and Culture Process. In papers on California and Great Basin Prehistory, edited by E. W. Ritter, P. D. Schulz, and R. Kautz, pp. 171–184. *University of California Center for Archaeological Research Publications 2*. Davis.
- Thompson, Kenneth. 1961. Riparian Forest of the Sacramento Valley, California. *Annals of the Association of American Geographers 51*:294–315.
- Treganza, A. E. 1954. Salvage Archaeology in Nimbus and Redbank Reservoir Areas, California. University of California Archaeology Survey Reports 26:1–30). University of California, Berkeley.
- Voegelin, E. 1942. Culture Element Distributions, XX: Northeast California. *University of California Anthropological Records 7*(2):47–252.
- Warner, R. E. and K. M. Hendrix. 1985. *Riparian Resources of the Central Valley and California Desert*. California Department of Fish and Game. Sacramento, CA.
- White, Gregory G. 2003a. Final Report of Testing and Mitigation at Four Sites on the Level (3) Long Haul Fiber Optic Alignment, Colusa County, California. *Archaeological Research Program Report No. 42*. Archaeological Research Program, California State University, Chico.
- . 2003b. Cultural Resource Overview and Management Plan, Sacramento River Conservation Area, Tehama, Butte, Glenn, and Colusa Counties, California, Prepared for the Nature Conservancy, Chico, CA.

10.68 AIR QUALITY AND CLIMATE CHANGE

- Ahrens, D. C. 2003. *Meteorology Today; an Introduction to Weather, Climate, & the Environment*. Brooks Cole, Inc. Pacific Grove, CA.
- ARB. See California Air Resources Board.
- BCAQMD. See Butte County Air Quality Management District.
- Butte County Air Quality Management District. 2007a. Our Air Quality. Available: <<http://www.bcaqmd.org/default.asp?docpage=html/air.htm#Air%20Quality%20Standards>>. Accessed December 2007. Chico, CA.
- . 2007b. Compliance Advisory Bulletin: Fugitive Dust Mitigation Measures. Available: <<http://www.bcaqmd.org/forms/FUGITIVE%20DUST%20mitigation%20measures.pdf>>. Accessed November 2007. Chico, CA.
- . 2007c. “Don’t Light Tonight” Program 2006/2007. Available: <<http://www.bcaqmd.org/forms/DLTprogram06-07.pdf>>. Accessed November 2007. Chico, CA.
- . 2004. Northern Sacramento Valley Air Basin 2003 Air Quality Attainment Plan. Approved March 24, 2004. Chico, CA. Available at <<http://www.bcaqmd.org/FORMS/03%20Attainment%20Plan.pdf>>. Accessed November 2007.
- . 1997 (Revised October). Indirect Source Review Guidelines. Adopted March 20, 1997. Available at: <<http://www.bcaqmd.org/FORMS/ISR.PDF>>. Accessed November 2007. Chico, CA.

- Butte County Fire Rescue. 2007. Burn Information Web Site. Oroville, CA. Available: <<http://www.buttefire.org/burninfo/burninfo.html>> Accessed November 26, 2007.
- California Air Resources Board. 2007a. Air Quality Data Statistics. Available: <<http://www.arb.ca.gov/adam/welcome.html>>. Accessed July 2007.
- . 2007b. National and California Ambient Air Quality Standards. Available: <<http://www.arb.ca.gov/aqs/aaqs2.pdf>>. Accessed July 2007.
- . 2007c (August). Draft Updated Greenhouse Gas Emissions Inventory Estimates. Available: <<http://www.arb.ca.gov/cc/ccei/emsmv/emsmv.htm>>. Accessed September 2007.
- . 2007d. State Implementation Plan. Available: <<http://www.arb.ca.gov/planning/sip/sip.htm>>. Accessed July 2007.
- . 2007e. URBEMIS 2007 for Windows, Version 9.2.2. Available: <<http://www.urbemis.com/>>. Accessed October 2007. Sacramento, CA.
- . 1990. Proposed regulation to reduce volatile organic compound emissions from consumer products, staff report. Sacramento, CA. As cited in California Air Resources Board. 2005 (April). Software User's Guide: URBEMIS2002 for Windows with Enhanced Construction Module. Sacramento, CA.
- California Climate Action Registry. 2007 (March). California Climate Action Registry General Reporting Protocol, Version 2.2. Los Angeles, CA. Available: <http://www.climateregistry.org/docs/PROTOCOLS/GRP%20V2-March2007_web.pdf>.
- California Department of Water Resources. 2006 (July). Progress on Incorporating Climate Change into Management of California's Water Resources (Technical Memorandum Report). Available: <<http://baydeltaoffice.water.ca.gov/climatechange/reports.cfm>>.
- California Energy Commission. 2006a. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004. (Staff Final Report). Publication CEC-600-2006-013-SF. Available: <http://www.climatechange.ca.gov/policies/greenhouse_gas_inventory/index.html> and <http://www.energy.ca.gov/global_climate_change/inventory/documents/index.html>.
- . 2006b (July). Our Changing Climate: Assessing the Risks to California. Publication CEC-500-2006-077. Available: <http://www.climatechange.ca.gov/biennial_reports/2006report/index.html>.
- CCAR. See California Climate Action Registry.
- CEC. See California Energy Commission.
- DWR. See California Department of Water Resources.
- EPA. See U.S. Environmental Protection Agency.
- Godish, T. 2004. Air Quality. Lewis Publishers. Boca Raton, FL.
- Intergovernmental Panel on Climate Change. 2007 (February). *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the IPCC. Geneva, Switzerland.
- IPCC. See Intergovernmental Panel on Climate Change.

Knowles, N., and D. R. Cayan. 2002. *Potential Effects of Global Warming on the Sacramento/San Joaquin Watershed and the San Francisco Estuary*. Geophysics Research Letter 29(18), 1891, doi:10.1029/2001GL014339.

Salinas, Julio. Staff Toxicologist. Office of Health Hazard Assessment, Sacramento, CA. August 3, 2004—telephone conversation with Kurt Legleiter of EDAW regarding exposure period for determining health risk.

Seinfeld, J. H., and S. N. Pandis. 1998. *Atmospheric Chemistry and Physics*. John Wiley & Sons, Inc. New York, NY.

U.S. Environmental Protection Agency. 2006a. Descriptive Air Pollutant Information. Available: <<http://www.epa.gov/ebtpages/airairpollutants.html>>. Accessed July 2006.

———. 2006b. Monitor Value Report (NAAQS). Available: <<http://www.epa.gov/air/data/geosel.html>>. Accessed July 2006.

Williams, Gail. Senior Air Quality Planner. Butte County Air Quality Management District., Chico, CA. November 27, 2007—e-mail to Austin Kerr of EDAW regarding whether BCAQMD Rule 300, part 2.1 would exempt campfire burning from burn-bans determined by the California Department of Forestry and Fire Protection.

10.79 CUMULATIVE IMPACTS

Ayres Associates. 2001. *Hydraulic Modeling of Proposed Restoration Activities in the Butte Basin Reach of the Sacramento River, River Miles 174 to 194, Glenn and Butte Counties, California*. Prepared for Jones & Stokes, Sacramento, CA.

———. 2002. *Two-dimensional Hydraulic Modeling of the Upper Sacramento River, River Miles 194.0 to 202.0, Glenn and Butte Counties, California*. Prepared for the Nature Conservancy, Chico, CA.

———. 2003. *Hydraulic Analysis of Riparian Habitat Conservation on the Sacramento River from Princeton to Beehive Bend – Hydraulic Modeling of the Sacramento River from River Miles 163 to River Miles 176, Glenn and Colusa Counties, California*. Prepared for the Nature Conservancy, Chico, CA.

———. ~~2007~~2008. *Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties; Sacramento River, RM 194–195*. ~~December 2007~~May 30, 2008. Prepared for The Nature Conservancy, Chico, CA.

Brown, D. L. and Wood, D. M. 2002. *Measure Key Connections between the River and Floodplain*. Report to The Nature Conservancy. Available at <http://www.sacramentoriverportal.org>.

Cannon, T. R. 2004. *Farmland Conversion: Should Habitat ‘Mitigate’ to Agribusiness*. Association of Environmental Professionals. Environmental Monitor.

Tilman, D., D. Wedin and J. Knops. 1996. Productivity and sustainability influenced by biodiversity in grassland ecosystems. *Nature* 379:718–720.

Tilman, D., K. Cassman, P. Matson, R. Naylor and S. Polasky. 2002. Agricultural sustainability and intensive production practices. *Nature* 418:671–677.

10.810 COMMENTS AND RESPONSES TO COMMENTS **ON THE DRAFT ENVIRONMENTAL IMPACT REPORT**

California State Parks. January 2007. Central Valley Vision Summary Report Findings and Recommendations. January 1, 2007. Accessed at http://www.parks.ca.gov/?page_id=23483 Accessed on June 11, 2008.

Flannery, Steve. June 23, 2008 – telephone conversation with Suzanne Enslow of EDAW regarding American River Parkway recreation facilities maintenance during flood events.

Hayes, Dick (CDF Butte County Unit). August 2008. Telephone conversation with Suzanne Enslow of EDAW regarding fire protection services for the project site.

Luster, R. April 2, 2008-email to Suzanne Enslow of EDAW regarding responses to comments on the Draft EIR, including information regarding the *1964 Army Crops Mud, Big Chico, and Sandy Gulch Improvement and Levee Construction Plan*.

APPENDIX A

Project Scoping



STATE OF CALIFORNIA – THE RESOURCES AGENCY
DEPARTMENT OF PARKS AND RECREATION

NOTICE OF PREPARATION

To: State Clearinghouse, Responsible and Trustee Agencies, Interested Individuals

Subject: Notice of Preparation of an Environmental Impact Report for the **Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project**

Lead Agency: California Department of Parks and Recreation
Northern Service Center
One Capitol Mall, Suite 500
Sacramento, CA 95814
Contact: Gary Waldron

Consultant: EDAW, Inc.
2022 J Street
Sacramento, CA 95811
Contact: Curtis Alling, Vance Howard

The California Department of Parks and Recreation (Department), as the Lead Agency, will prepare a project level Environmental Impact Report (EIR) for the Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project (proposed project). We would like to know the views of interested persons, organizations, and agencies as to the scope and content of the information to be included and analyzed in the EIR. Agencies should comment on the elements of the environmental information that are relevant to their statutory responsibilities in connection with the proposed project.

The project description, location, and possible environmental effects (to the extent known) are contained in this Notice of Preparation (NOP).

Written comments should be submitted at the earliest possible date, but no later than 5:00 pm on September 28, 2007 to Denise Reichenberg, Sector Superintendent, California State Parks, at the address shown below. Responses should include the name of a contact person at your agency.

Mrs. Denise Reichenberg
Superintendent - Valley Sector
California State Parks
525 Esplanade
Chico, California 95926
(530) 895-4304

A planning workshop and EIR scoping meeting has been scheduled to give the public an opportunity to comment on the scope, focus, and content of the proposed project. The meeting will be held at 6:00 pm on September 19, 2007 at Bidwell Mansion SHP Visitor Center located at 525 The Esplanade, Chico CA 95926.

PROJECT TITLE

Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project

PROJECT LOCATION

The project site includes the Singh Unit and Nicolaus property. These two non-contiguous parcels are depicted on the USGS Ord Ferry, California USGS 7.5 minute topographic map, within the unsurveyed portions of Township 22 North, Range 1 West (Exhibit 1, USGS 7.5-Minute Topographic Map). The project site, located along the east bank of the Sacramento River, is adjacent to Mud Creek just upstream of the confluences of Big Chico Creek and Mud Creek, and of Big Chico Creek and the Sacramento River. The Singh Unit is part of the Big Chico Creek Riparian Area subunit of the Bidwell-Sacramento River State Park (BSRSP). The Nicolaus property is located north of the Big Chico Creek Riparian Area subunit and immediately east of the Indian Fishery subunit of the BSRSP.

Access to the Singh Unit and Nicolaus property is provided by River Road, which runs in a north-south alignment along properties located on the eastern bank of the Sacramento River. West Sacramento Avenue intersects with River Road, thereby linking the downtown Chico area to the Singh Unit, Nicolaus property, and BSRSP. In addition, Chico River Road is the other primary roadway that provides access to River Road from Chico. Refer to Exhibit 2, Project Site Access.

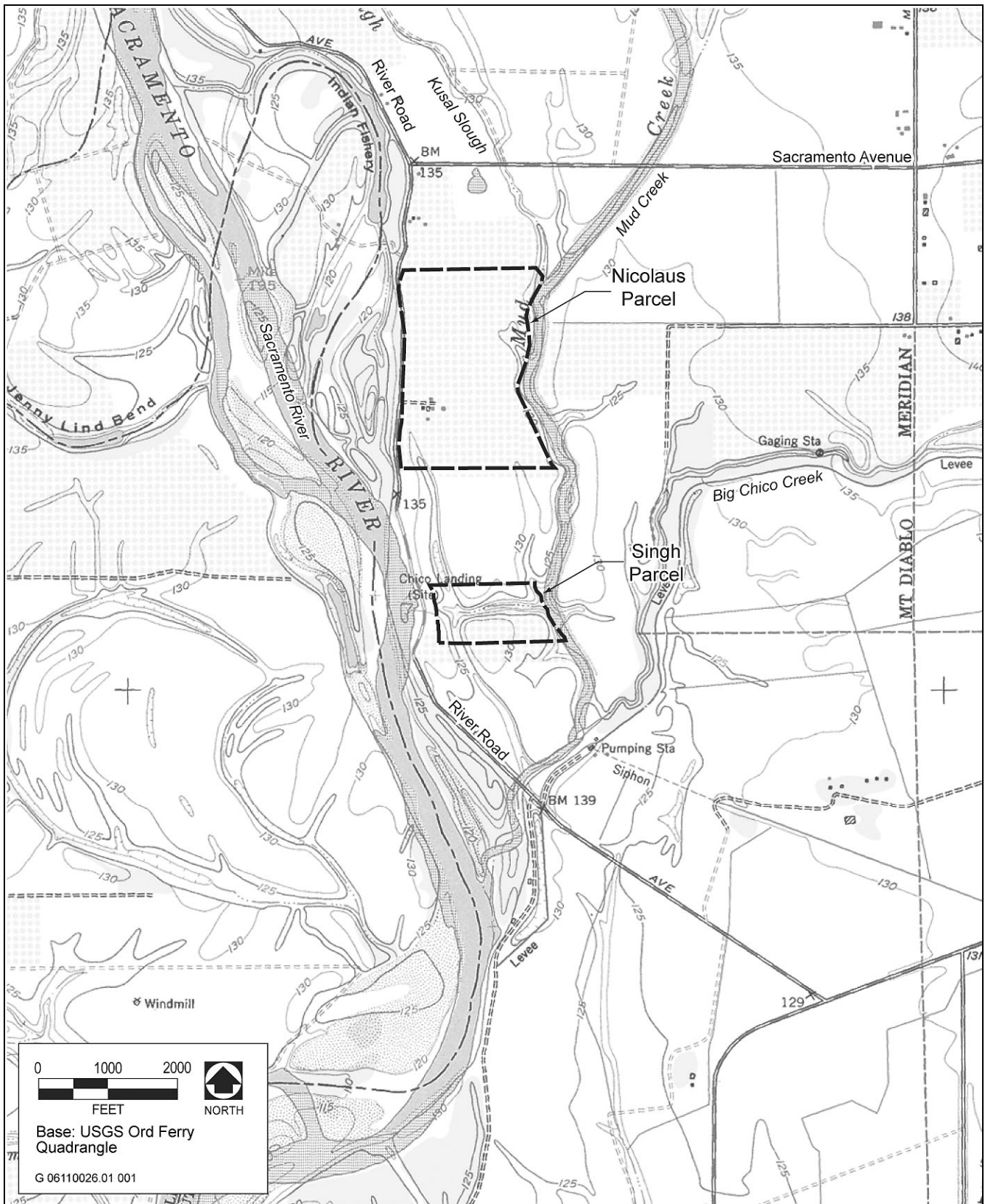
PROJECT DESCRIPTION

The Nature Conservancy (TNC), in collaboration with the Department, is proposing to implement a habitat restoration and outdoor recreation facility development project on two parcels known as the Singh Unit and Nicolaus property (collectively, the Singh and Nicolaus Project, or project site) along the Sacramento River within and adjacent to BSRSP, west of the City of Chico in Butte County, California (Exhibit 3, Project Vicinity). The Singh Unit is owned by the Department and located within BSRSP. The Nicolaus property is currently owned by TNC, but would be transferred to the Department, as part of the proposed project, prior to implementation of habitat restoration activities or development of outdoor recreational facilities. It is located immediately adjacent to the Indian Fisheries subunit of BSRSP. Both the Singh Unit and Nicolaus property are currently in agricultural production (walnut and/or almond orchards).

The first project objective is to restore natural topography and vegetation on the Singh Unit and Nicolaus property. This includes the removal of two human made berms on the Singh Unit; the removal of non-native vegetation, including eucalyptus on the Singh Unit adjacent to River Road.; and, restoration of the following natural communities on both parcels:

- ▶ cottonwood mixed riparian forest,
- ▶ valley oak savannah,
- ▶ mixed riparian forest,
- ▶ valley oak riparian forest, and
- ▶ native grasslands.

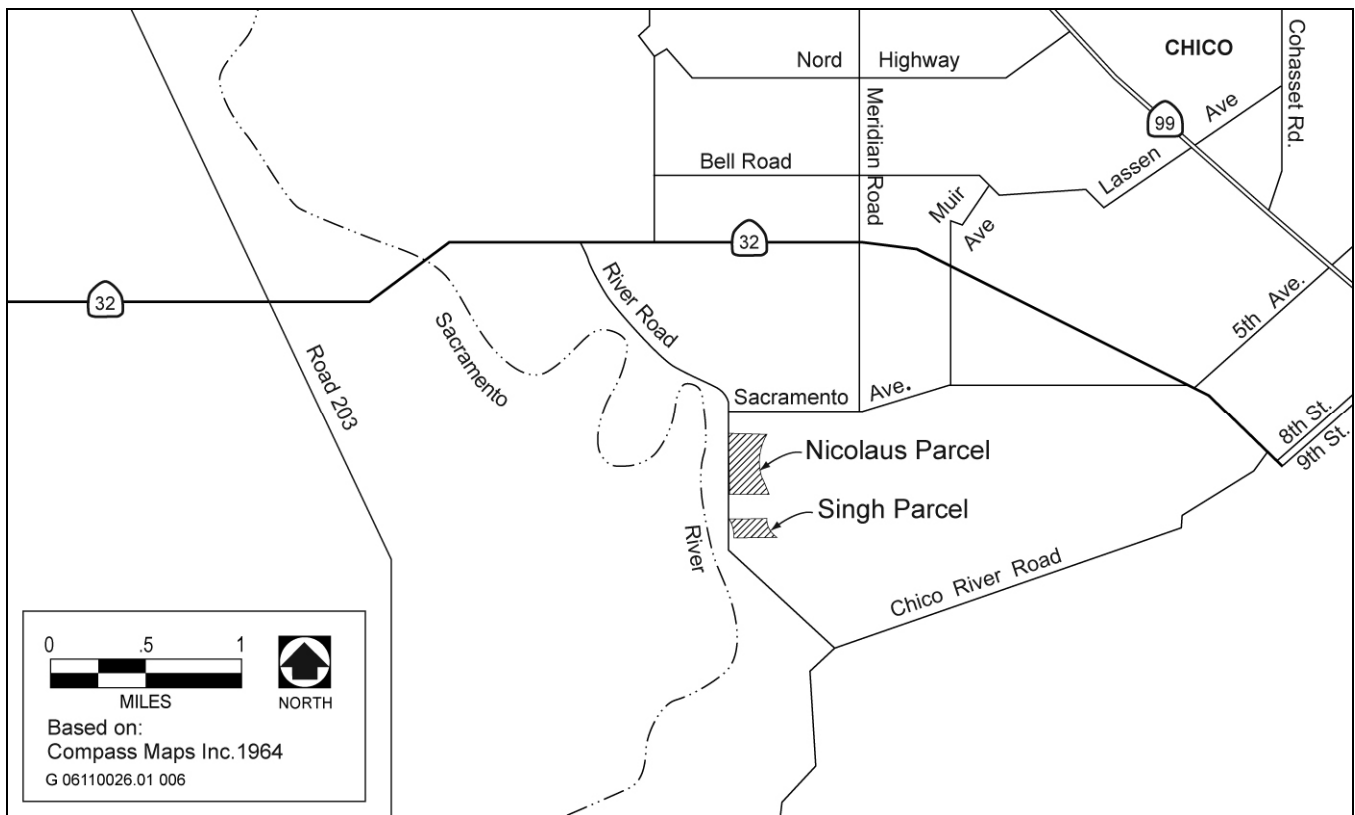
The Singh Unit and Nicolaus property present a unique opportunity for habitat restoration because they are located at the confluence of the Sacramento River, Big Chico Creek, and Mud Creek (Exhibit 4, Aerial Photo of the Project Site). The protection and restoration of habitat on these two parcels would aid in the recovery of special-status species, rehabilitate natural processes along the river, protect and restore riparian habitat, and improve water quality. The primary terrestrial and avian wildlife special-status species that would benefit from restoration of the project site include western yellow-billed cuckoo, Swainson's hawk, least Bell's vireo, and valley elderberry longhorn beetle (VELB). Several special-status fish species, including Chinook salmon, green sturgeon, and steelhead trout, would also benefit. The proposed project would add approximately 150 acres of restored riparian habitat to the existing 2,887 acres of protected and restored habitat along the Sacramento River between river mile (RM) 199 and RM 193.



Source: Adapted by EDAW in 2007

USGS 7.5-Minute Topographic Map

Exhibit 1



Source: Adapted by EDAW in 2007

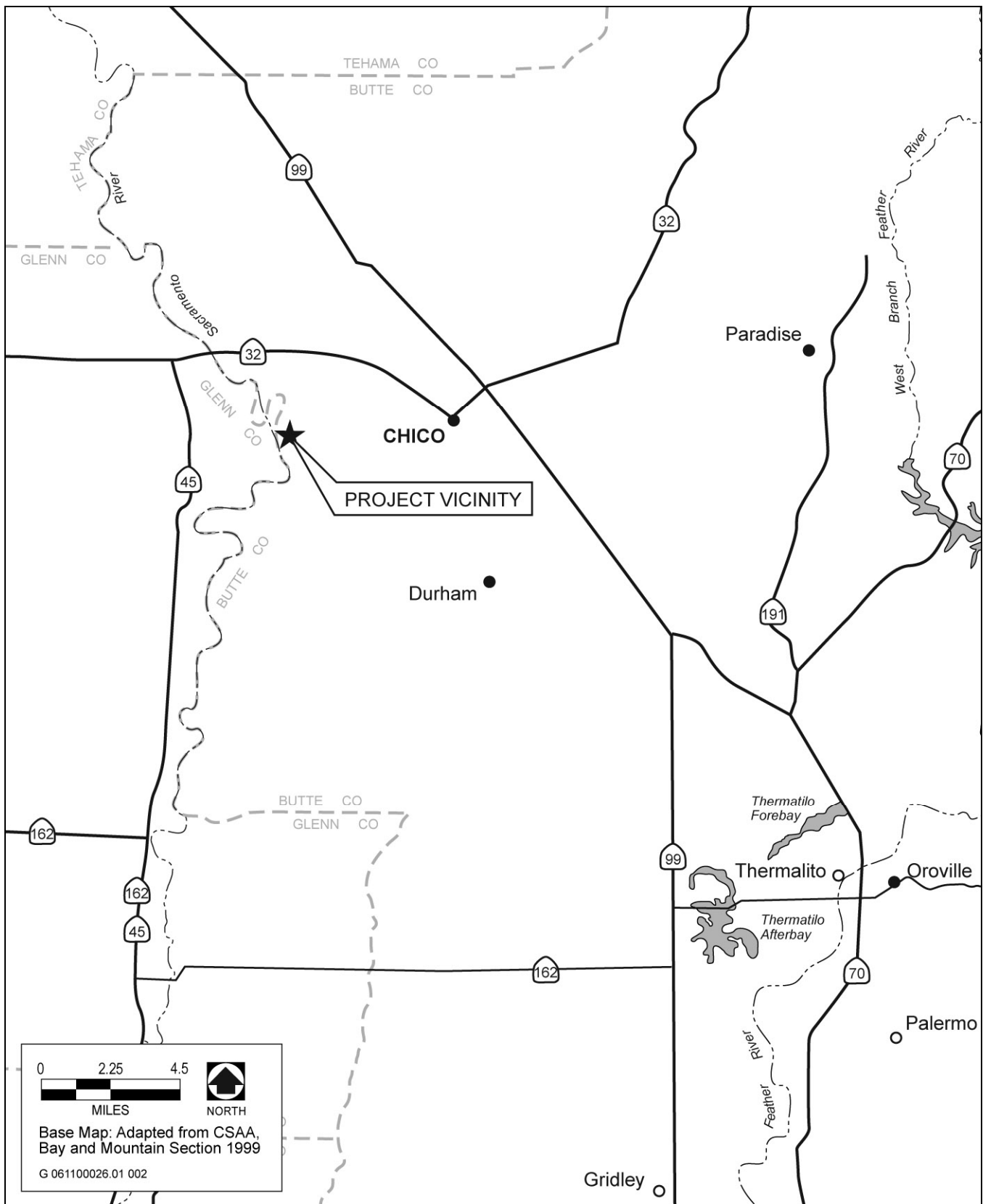
Project Site Access

Exhibit 2

The second project objective includes the transfer of ownership of the Nicolai property from TNC to the Department and development of outdoor recreation facilities on both the Nicolai property and the Singh Unit. The property would become part of BSRSP prior to implementation of habitat restoration activities or outdoor recreation facilities development. The inclusion of the Nicolai property within BSRSP, and restoration of the Nicolai property and the Singh Unit, would present an opportunity to enhance and expand the Park’s recreational and public access opportunities through new and expanded trails, new day and overnight facilities, and visitor-service enhancement. It would also enable a more efficient location for the BSRSP headquarters facilities. Therefore, in conjunction with restoration activities, the proposed project would include creation and expansion of public outdoor recreation facilities. New trails would be created on both properties that would be aligned to connect with existing and proposed trails and facilities within the Park. New day-use and overnight camping facilities would be constructed on the Nicolai property. The Park headquarters would be relocated to the existing farm buildings on the Nicolai property, which are on higher, less frequently flooded ground compared to the current headquarters location. By expanding outdoor recreation facilities and restoring habitat at BSRSP, this project would increase public accessibility and opportunities to the middle reaches of the Sacramento River, while providing more habitat for riparian and river-dependent wildlife and plant species.

Tiering From the BSRSP General Plan EIR

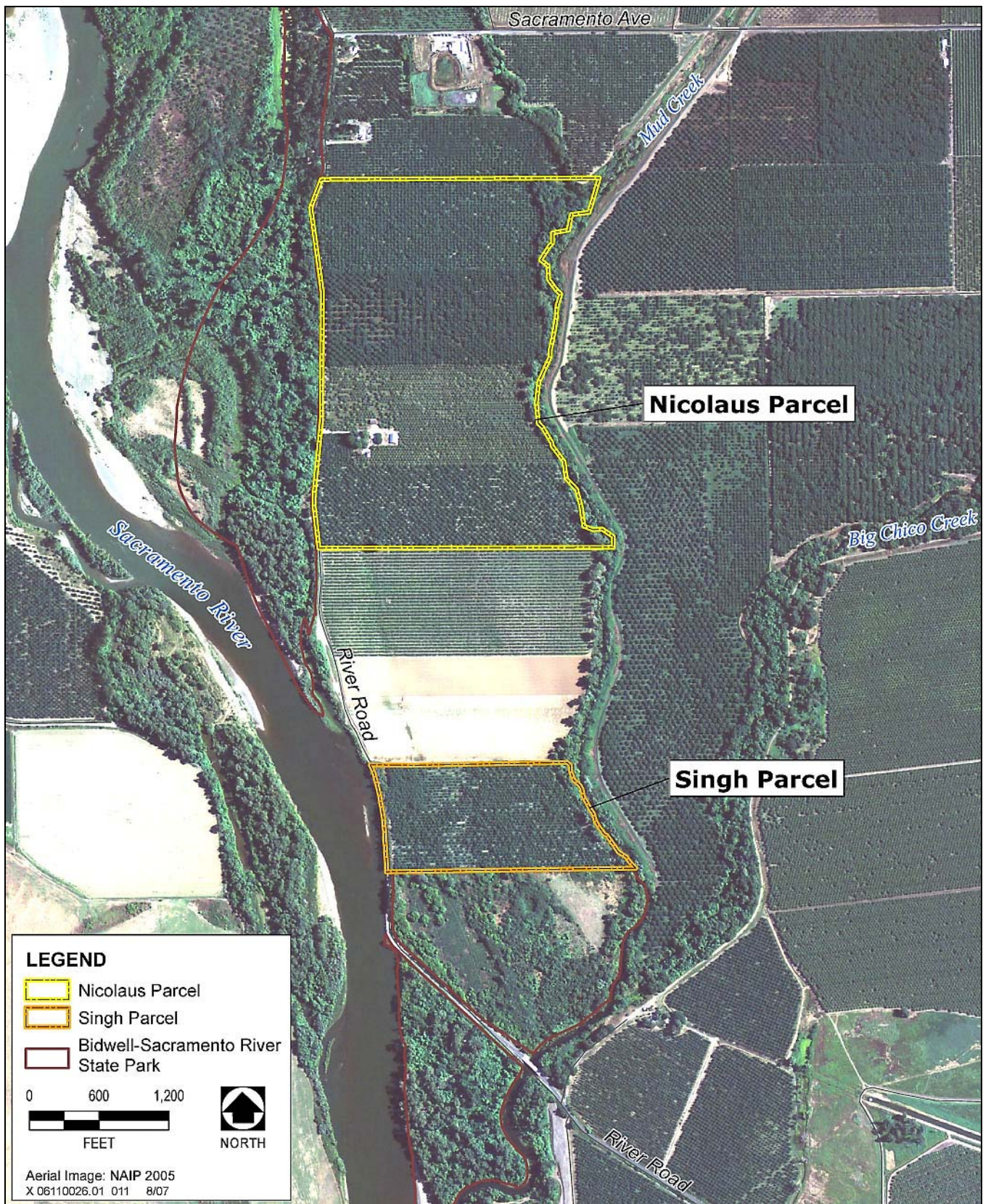
State CEQA Guidelines Section 15152 allows the use of analysis of general matters contained in a general plan EIR with later EIRs on narrower projects. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan to a site-specific EIR, as is the case with the proposed project. Because the project would be implemented by the Department and would include the addition of the Nicolai property to BSRSP, it is appropriate to use the tiering process for the environmental analysis from the BSRSP General Plan EIR to this



Source: Adapted by EDAW in 2007

Project Vicinity

Exhibit 3



Source: Adapted by EDAW in 2007

Aerial Photograph of the Project Site

Exhibit 4

project-level EIR. The BSRSP General Plan EIR was prepared to serve as the programmatic environmental document to be referenced in implementing future actions included in the General Plan. The proposed project is consistent with the actions included in the General Plan.

Issues to Be Addressed In the EIR

The EIR for the proposed project will evaluate the potential adverse and beneficial environmental impacts of implementing the proposed project during both construction and operation of the facilities. The document will also evaluate the cumulative impacts of implementing the proposed project in conjunction with other related past, present, and probable future projects.

Based on preliminary considerations of the elements of the proposed project and review of the BSRSP General Plan EIR, some of the issues will be addressed in detail in the EIR and some will reference analysis in the BSRSP General Plan EIR. Potential environmental effects that will likely be analyzed in detail in the EIR include:

- ▶ **Agriculture.** The proposed project would involve the conversion of farmland designated as “Irrigated Farmland” to non-agricultural uses.
- ▶ **Biological Resources.** Implementing the proposed project could result in the degradation of individual special-status species and/or habitats for special-status plant, wildlife, or fish species.
- ▶ **Cultural Resources.** Implementing the proposed project could damage or destroy unidentified cultural or Paleontological resources during project construction or other associated ground-disturbing activities.
- ▶ **Hazards and Hazardous Materials.** Implementing the proposed project could involve construction activities that could result in the temporary release of hazardous substances, such as oil, into soil or water, or exposure to hazardous materials that could be present at the project site.
- ▶ **Hydrology and Water Quality.** Implementing the proposed project would involve changes in vegetation types and construction of outdoor recreation facilities within the floodplain of the Sacramento River.

Potential environmental impacts that will likely be addressed by tiering from the BSRSP General Plan EIR, include: aesthetics, air quality, geology and soils, noise, transportation and traffic, and utilities and service systems.

Environmental issues not anticipated to be analyzed in the EIR, include: land use and planning, mineral resources, population and housing, public services, and recreation.

Intended Uses of the EIR

The Department and the Parks and Recreation Commission will use the EIR to consider the environmental effects, mitigation measures, and alternatives, when reviewing the proposed project for approval. The EIR will serve as the State’s CEQA compliance document for implementation of the proposed project.

By: _____

Signature: _____

Title: _____

Date: _____

Comment Letters

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 942360001
(916) 653-5791



September 6, 2007

Gary Waldron
California Department of Parks and Recreation
One Capitol Mall, Suite 500
Sacramento, California 95814

Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation
Facilities Development Project
State Clearinghouse (SCH) Number: 2007082160

The project corresponding to the subject SCH identification number has come to our attention. The limited project description suggests your project may be an encroachment on the State Adopted Plan of Flood Control. You may refer to the California Code of Regulations, Title 23 and Designated Floodway maps at <http://recbd.ca.gov/>. Please be advised that your county office also has copies of the Board's designated floodways for your review. If indeed your project encroaches on an adopted food control plan, you will need to obtain an encroachment permit from the Reclamation Board prior to initiating any activities. The attached Fact Sheet explains the permitting process. Please note that the permitting process may take as much as 45 to 60 days to process. Also note that a condition of the permit requires the securing all of the appropriate additional permits before initiating work. This information is provided so that you may plan accordingly.

If after careful evaluation, it is your assessment that your project is not within the authority of the Reclamation Board, you may disregard this notice. For further information, please contact me at (916) 574-1249.

Sincerely,

A handwritten signature in black ink, appearing to read "CH Huitt".

Christopher Huitt
Staff Environmental Scientist
Floodway Protection Section

Enclosure

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

Encroachment Permits Fact Sheet

Basis for Authority

State law (Water Code Sections 8534, 8608, 8609, and 8710 – 8723) tasks the Reclamation Board with enforcing appropriate standards for the construction, maintenance, and protection of adopted flood control plans. Regulations implementing these directives are found in California Code of Regulations (CCR) Title 23, Division 1.

Area of Reclamation Board Jurisdiction

The adopted plan of flood control under the jurisdiction and authority of the Reclamation Board includes the Sacramento and San Joaquin Rivers and their tributaries and distributaries and the designated floodways.

Streams regulated by the Reclamation Board can be found in Title 23 Section 112. Information on designated floodways can be found on the Reclamation Board's website at http://recbd.ca.gov/designated_floodway/ and CCR Title 23 Sections 101 - 107.

Regulatory Process

The Reclamation Board ensures the integrity of the flood control system through a permit process (Water Code Section 8710). A permit must be obtained prior to initiating any activity, including excavation and construction, removal or planting of landscaping within floodways, levees, and 10 feet landward of the landside levee toes. Additionally, activities located outside of the adopted plan of flood control but which may foreseeable interfere with the functioning or operation of the plan of flood control is also subject to a permit of the Reclamation Board.

Details regarding the permitting process and the regulations can be found on the Reclamation Board's website at <http://recbd.ca.gov/> under "Frequently Asked Questions" and "Regulations," respectively. The application form and the accompanying environmental questionnaire can be found on the Reclamation Board's website at <http://recbd.ca.gov/forms.cfm>.

Application Review Process

Applications when deemed complete will undergo technical and environmental review by Reclamation Board and/or Department of Water Resources staff.

Technical Review

A technical review is conducted of the application to ensure consistency with the regulatory standards designed to ensure the function and structural integrity of the adopted plan of flood control for the protection of public welfare and safety. Standards and permitted uses of designated floodways are found in CCR Title 23 Sections 107 and Article 8 (Sections 111 to 137). The permit contains 12 standard conditions and additional special conditions may be placed on the permit as the situation warrants. Special conditions, for example, may include mitigation for the hydraulic impacts of the project by reducing or eliminating the additional flood risk to third parties that may caused by the project.

Additional information may be requested in support of the technical review of

your application pursuant to CCR Title 23 Section 8(b)(4). This information may include but not limited to geotechnical exploration, soil testing, hydraulic or sediment transport studies, and other analyses may be required at any time prior to a determination on the application.

Environmental Review

A determination on an encroachment application is a discretionary action by the Reclamation Board and its staff and subject to the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.). Additional environmental considerations are placed on the issuance of the encroachment permit by Water Code Section 8608 and the corresponding implementing regulations (California Code of Regulations – CCR Title 23 Sections 10 and 16).

In most cases, the Reclamation Board will be assuming the role of a “responsible agency” within the meaning of CEQA. In these situations, the application must include a certified CEQA document by the “lead agency” [CCR Title 23 Section 8(b)(2)]. We emphasize that such a document must include within its project description and environmental assessment of the activities for which are being considered under the permit.

Encroachment applications will also undergo a review by an interagency Environmental Review Committee (ERC) pursuant to CCR Title 23 Section 10. Review of your application will be facilitated by providing as much additional environmental information as pertinent and available to the applicant at the time of submission of the encroachment application.

These additional documentations may include the following documentation:

- California Department of Fish and Game Streambed Alteration Notification (<http://www.dfg.ca.gov/1600/>),
- Clean Water Act Section 404 applications, and Rivers and Harbors Section 10 application (US Army Corp of Engineers),
- Clean Water Act Section 401 Water Quality Certification, and
- corresponding determinations by the respective regulatory agencies to the aforementioned applications, including Biological Opinions, if available at the time of submission of your application.

The submission of this information, if pertinent to your application, will expedite review and prevent overlapping requirements. This information should be made available as a supplement to your application as it becomes available. Transmittal information should reference the application number provided by the Reclamation Board.

In some limited situations, such as for minor projects, there may be no other agency with approval authority over the project, other than the encroachment permit by Reclamation Board. In these limited instances, the Reclamation Board

may choose to serve as the "lead agency" within the meaning of CEQA and in most cases the projects are of such a nature that a categorical or statutory exemption will apply. The Reclamation Board cannot invest staff resources to prepare complex environmental documentation.

Additional information may be requested in support of the environmental review of your application pursuant to CCR Title 23 Section 8(b)(4). This information may include biological surveys or other environmental surveys and may be required at anytime prior to a determination on the application.



**Bidwell-Sacramento River State Park
Habitat Restoration and Outdoor Recreation Facilities Development Project**

**Bidwell-Sacramento River State Park
Habitat Restoration and Outdoor Recreation Facilities Development Project
CEQA SCOPING COMMENTS**

(please hand in or mail back by September 28, 2007)

Name: Laura E. Mendonca
Organization (if any): Property owner
Address (optional): 3437 Chico River Road
City, State, Zip: Chico, CA 95928

The California Department of Parks and Recreation (Department) is preparing an Environmental Impact Report (EIR) for Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project. The Department invites you to provide specific comments on the scope of issues or topics to be addressed in the Draft EIR.

Thank you!

Comments

- Place 300'-500' foot setback on State Parks side of the land, planting grass habitat only.
- Drain sloughs, cleaning them out and maintain them through State Parks property as needed.
- If fences are to be installed, they should be one cable only, as to not restrict water flow.
- State Parks should patrol properties 24 hours a day.
- Burns on Mud Creek behind Singh property should be removed.
- Habitat planted should not restrict the flow of water.
- A complete survey done for property lines.

MINASIAN, SPRUANCE,
MEITH, SOARES &
SEXTON, LLP

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P.O. BOX 1679
OROVILLE, CALIFORNIA 95965-1679

Writer's email: pminasian@minasianlaw.com

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DUSTIN C. COOPER

WILLIAM H. SPRUANCE,
Of Counsel

MICHAEL V. SEXTON,
Of Counsel

TELEPHONE:
(530) 533-2885

FACSIMILE:
(530) 533-0197

September 21, 2007

Denise Reichenberg
Superintendent, Valley Sector
California State Parks
525 Esplanade
Chico, California 95926

Re: Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor
Recreation Facilities Development Project

Dear Ms. Reichenberg:

This letter is being sent on behalf of the Sacramento River Reclamation District.

You have provided Notice of preparation of an Environmental Impact Report for the Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project, a proposed Project.

This project involves substantial proposed revegetation and replanting of existing agricultural land planted to orchards and providing for passage of flood waters with little or no restriction.

Enclosed you will find letters dated October 3, 2000, a copy of which went to the State of California Department of Parks & Recreation, our letter of April 13, 2005 regarding the Nicholas property, a letter of December 29, 2005 to the California Department of Parks and Recreation relative to the Big Chico Creek Access, a letter dated December 2, 2005 relating to a Draft Mitigated Negative Declaration, and a letter of September 5, 2006 to Katherine Tobias of the California Department of Parks & Recreation in regard to a boat ramp project which had the potential to change the direction and flow pattern during flood events. In each letter we point out that lands in

To: California State Parks
Re: Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project
Date: September 21, 2007

Page 2

these areas are in a critical area for flooding, and that planting or maintenance of vegetation can redirect floodwaters. In each letter we ask that your Agency work with the Sacramento River Reclamation District to avoid such an effect and to design your work so that flows will not be changed.

After initial optimism that this Agency of the State of California would in fact comply with the California Environmental Quality Act and comply with its duties not to attempt to plant vegetation and maintain artificial barriers to flood flow upon lands which are now developed to orchard purposes and which are acquired by the State of California, the Sacramento River Reclamation District is tired of writing to you and asking that you comply with your duties under CEQA to consult with responsible agencies and your duties under the Regulations adopted by the County of Butte which the Sacramento River Reclamation District and the County of Butte are vested with the powers to enforce, relating to this floodway. It is the simplest thing in the world to simply enter into an agreement with the SRRD that you will not block the current capacity existing between the trees of farmed walnut orchards and open space vegetation under the guise of creating a riparian forest that will re-divert or change the flow pattern of flood events. It is also the simplest thing in the world to provide us with the information so that we can determine whether an exemption from a permit requirement should be granted by the County of Butte.

We now have notice that yet another CEQA process is to begin. How can alternatives even be outlined without your understanding what flowways must be maintained without vegetative blockage?

Nevertheless, your Agency apparently does not understand that the consultation requirement and the Floodplain Regulations in this area are critical to the maintenance of existing farming operations, and that the proposal to write a full EIR in regard to "restoring riparian habitat" without first consulting with the Responsible Agencies in regard to maintaining flood flow patterns and flood passage capacity is a violation of law. This time, if you spend public monies purporting to employ someone to write an EIR and any of those monies are expended prior to the time you have consulted with and developed the specific plan in regard to revegetation, including maintaining hydraulic capacity and debris-catching capacity so that flood patterns will not be changed as a result of the conversion of use of these properties, we will have no choice but to commence legal action to call the attention of the State Clearinghouse to the violation of State law by your Agency and to seek recovery of all monies which are expended with any consultant on the basis that those funds were wasted and utilized in a fashion and for purposes not authorized under the law.

To: California State Parks
Re: Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project
Date: September 21, 2007

Page 3

State agencies are not supposed to wear down other local public agencies by ignoring them. You may have unlimited public funds through the ill-advised bond measures approved by voters, and you and the Nature Conservancy may develop your plans and schemes without regard to the requirements of law, but the law requires that action and steps not be taken until all environmental consequences have been examined, and that those actions and steps not be taken prior to the examination, consultation and consideration with Responsible Local Public Agencies such as the Sacramento River Reclamation District. We have been waiting for seven (7) years. It is not likely that we will wait much longer.

Very truly yours,

MINASIAN, SPRUANCE,
MEITH, SOARES & SEXTON, LLP

By: 

PAUL R. MINASIAN
Acting Secretary
SACRAMENTO RIVER RECLAMATION DISTRICT

PRM:df
Enclosures

cc w/w enclosures: Board of Trustees, Sacramento River Reclamation District
S:\Denise\Sacred\State Parks CA, Bidwell St Pk Habitat Restoration Project.1.wpd

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PAUL JACKSON MINASIAN, 1933-1981
DAVID H. MINASIAN, RET. 1989

pminasian@minasianlaw.com

FILE COPY

October 3, 2000

Stuart Edell, Manager
Land Development Division
Butte County Public Works Department
7 County Center Drive
Oroville, California 95965

Rob McKenzie and Neil H. McCabe
Assistant County Counsel
County of Butte
25 County Center Drive
Oroville, California 95965

Re: Development Permit, Department of Parks & Recreation, for the Peterson Addition to the Bidwell-Sacramento River State Park

Ladies and Gentlemen:

A very productive meeting was held with Woody Elliott of the Department of Parks & Recreation and the Board of Directors of Sacramento River Reclamation District ("SRRD") on October 2, 2000. As you know, both the County and the SRRD are feeling their way along in regard to the Development Permit process. The fact that the first Development Permit to come before the Butte County and the SRRD involve an intensive revegetation proposal by the Department of Parks & Recreation makes the effort even more important and demands logical treatment.

We believe that as a result of the meeting and discussion that there was a substantial recognition on the part of the Department of Parks & Recreation, which recognition of course pre-existed the meetings, that the planting of intensive vegetation in low lying areas could result in blockage and structural changes in flood elevations and the retention and lack of drainage of flood waters in Mud Creek upon the decline in river levels in the Sacramento River.

To: Butte County Public Works Department; Butte County Counsel
Re: Development Permit, Department of Parks & Recreation, for the Peterson Addition to the Bidwell-Sacramento River State Park
Date: October 3, 2000
Page 2

The Board of Directors and the Department of Parks & Recreation recognize that not all vegetative developments, including agricultural developments, will involve these potential impacts, nor will all revegetation plans have the potential of being equivalent to structural impediments to flood flows or drainage. Mr. Elliott indicated that if the SRRD would suggest alternatives, the prospect of obtaining a Permit from Butte County might well be advantageous compared to going through the Reclamation Board. After extensive discussion, the SRRD agreed that if a Development Permit Application was made by the Department of Parks & Recreation to the County of Butte (in which Permit they may reserve any claims that no permitting authority exists because it is difficult to show the flood and drainage changes as a result of intensive revegetation work resulting in a structure or levee equivalent), and if that Permit showed the maintenance of at least 100 yards (300 feet) of open space Savannah development instead of the planting of trees, bushes and Himalayan blackberry bushes in the low-lying areas of Fields 1, 2 and 3 so that water may leave Mud Creek near the Northeast corner of the Singh property and the Peterson Addition, and proceed during drainage phases in which the level of the Sacramento River is dropping across the Peterson Addition towards the Sacramento River, that with the other mitigation measures proposed by the SRRD and the existing plan of the Department of Parks & Recreation, that no significant detrimental impact will arise as a result of flood or drainage characteristics.

This 300' wide area need not be in one open swath (which of course would be preferable), and the Department of Parks & Recreation may locate it in two or three parallel areas in the low points of its existing property. One excellent portion of this plan is that there is no intent to provide for extensive leveling or contouring of the property to change the drainage pattern in an unnatural way.

We believe, therefore, that the Department of Parks & Recreation will shortly be asking that you issue a Permit based upon the CEQA process and the Development Plan alternatives. Although the density of planting is extremely high in those areas in which planting will occur, the above change should be located in a fashion in which little impact will occur on adjoining agricultural lands to change either the flooding pattern or the drainage pattern after floods.

As soon as you have received the Application for Permit, we would appreciate receiving a copy of it to conform that this change which was discussed has been included. The District will be happy to review the plan and the hydrologic work of Mr. Countryman, and report to the County our recommendations, thus reducing the investment of time by the County. We will notify the surrounding landowners and incorporate their views.

The issuance of a Permit by Butte County is in fact a betterment and improvement upon the conditions faced by the Department of Parks & Recreation. If Parks & Recreation were required to submit this matter to the Reclamation Board, it seems unlikely that they could get their project moving this fall and winter when the planting conditions will be ideal.

To: Butte County Public Works Department; Butte County Counsel
Re: Development Permit, Department of Parks & Recreation, for the Peterson Addition to the Bidwell-Sacramento
River State Park
Date: October 3, 2000
Page 3

We commend the Department of Parks & Recreation and Mr. Elliott for their cooperative attitude, and look forward to receiving a copy of the Permit Application with this modification so that we may send a final letter of approval on behalf of the Reclamation District and aid the County in processing so that there is no duplication of effort.

Very truly yours,

MINASIAN, SPRUANCE, BABER,
MEITH, SOARES & SEXTON, LLP

By: _____
PAUL R. MINASIAN

PRM:df
cc: Board of Directors, SRRD
Woody Elliott, State of California Department of Parks & Recreation

MINASIAN, SPRUANCE,
MEITH, SOARES &
SEXTON, LLP

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FILE COPY

December 29, 2005

California Department of Parks & Recreation
Acquisition and Development Division
Attn: Gail Sevrens
Associate Park & Recreation Specialist
One Capitol Mall, Ste 500
Sacramento, California 95814

Re: Response to Comments, Draft Initial Study/Mitigated Negative Declaration
Big Chico Creek Access to Sacramento River, Draft IS/MND
Bidwell-Sacramento River State Park

Dear Ms. Sevrens:

In your response of December 15, 2005 to our letter regarding the Draft Initial Study/Mitigated Negative Declaration on the Big Chico Creek Access to Sacramento River Project in the Bidwell-Sacramento River State Park, in your response to Comment No. 1 you state:

“Per the Public Resources Code §21069, a ‘Responsible Agency’ means a public agency, other than the lead agency, which has responsibility for carrying out or approving a project.

“The proposed project site does not fall within the jurisdiction of the SRRD, therefore the SRRD does not have responsibility to approve the approve the project, and SRRD is not a Responsible Agency for this Project.”

You are in error. The Sacramento River Reclamation District's jurisdiction includes all of the land includes all of what you refer to as the “Peterson Addition” boundary, and it includes to the centerline of Mud Creek and Big Chico Creek to its confluence to the Sacramento River. The SRRD is responsible for monitoring that land improvements or changes do not modify the flow

To: California Department of Parks & Recreation
Re: Draft Initial Study/Mitigated Negative Declaration
Big Chico Creek Access to Sacramento River, Draft IS/MND
Bidwell-Sacramento River State Park
Date: December 29, 2005

Page 2

of flood waters or waters returning after escaping the Sacramento River or Mud Slough within the whole of this area, including the area where you propose the parking lot and boat ramp be constructed.

CEQA requires that you not divide a project into small increments and thence claim that there is no significant environmental impact. In this instance we wrote to you in 2000 and include a Resolution of the SRRD making clear that the installation of improvements (in that case, revegetation of the Peterson Tract) could have a significant impact upon flood flows and upon erosion upon adjoining properties in which parties are continuing to attempt to farm. You have never completed that Environmental Impact Report for the overall Peterson annex project or property. Instead, now you are apparently attempting to piecemeal the project by installing a parking lot and boat ramp.

You sent to us a copy of Joe Countryman's report in regard to the proposed planting and revegetation, but you do not include any report from Mr. Countryman or his firm in regard to the potential impacts of the parking lot and boat ramp. Mr. Countryman proposed a very general solution to the problem, which was that a 300' wide corridor for drainage and passage of flood waters be maintained on the property. He did not limit that corridor to the area fronting Mud Creek. The corridor area should extend through Mud Creek to Big Chico Creek and to the Sacramento River. Your proposed boat ramp and parking area is right in the middle of the 300' corridor, which corridor is important for the drainage of flood water and their return rapidly to the Sacramento River when flood levels decline.

It may well be that your boat ramp and parking lot will have no impact in catching debris or diverting flood water flows. However, it is a construction, does have the potential to raise flood water levels or groundwater levels 3 feet or more which, under the Regulations being administered by the SRRD requires either a waiver or permit to be issued by the SRRD.

We think if the Department of Parks & Recreation would stop sparring about this matter and instead recognize that the SRRD has a valid and important purpose and interest in the area, that we could resolve this matter. First, please do not send us an aerial photographs that pre-dates the Chico River Road bridge replacement. The bridge has been replaced and we need to assure there is sufficient flood flow capacity within the area from the confluence of Mud Creek through Big Chico Creek to return flood waters which have escaped the main channel of the Sacramento River in an orderly manner. We and you need to review the vegetation within the 300-foot corridor area to assure that there will not be cumulative impacts. A photograph which shows vegetation 5 years ago does not help. Secondly, Mr. Countryman is well known to us and respected. We suggest that you have Mr. Countryman update his information on a current aerial photo in regard to whether or not the Peterson Addition 300' Flood Plain Clearance Program has been maintained, and whether or not waters flowing overland will be able to return to Big Chico

To: California Department of Parks & Recreation
Re: Draft Initial Study/Mitigated Negative Declaration
Big Chico Creek Access to Sacramento River, Draft IS/MND
Bidwell-Sacramento River State Park
Date: December 29, 2005

Page 3

Creek through the area of the parking lot and boat ramp without substantial damage to them, and without diversion or directing those flows in a fashion that erosion will occur. It is obvious from the aerial photograph that flood waters currently return to Big Chico Creek in this proposed parking lot and boat ramp area, flowing from northwest to southeast. In addition, we do not know why you have drawn the 300' flood corridor as extending in a fashion in which the water would be channeled into the narrow area of Big Chico Creek. The 300' flood corridor is to extend in a Westerly direction along the boundary of Big Chico Creek on the Peterson addition property, and in exactly the area of the parking lot and boat ramp.

The parking lot and boat ramp area in fact may be totally compatible with this 300' clearance area and our requirements to preserve the means of flood flows entering and exiting the area, but at this point, without more information and an adequate environmental study we cannot waive the requirements for an application and processing of a permit under Butte County Regulations by this District. We call to your attention that monetary fines and a misdemeanor can exist if the requirements of the regulations are not met. It seems a shame that these issues might arise because your agency will not communicate with the SRRD.

We look forward to hearing from you.

Very truly yours,

MINASIAN, SPRUANCE,
MEITH, SOARES & SEXTON, LLP

By: _____

PAUL R. MINASIAN

PRM:df

cc: Board of Trustees, Sacramento River Reclamation District
Stuart Edell, Butte County Planning Commission
S:\Denise\Sacred\CA Dept of Parks & Rec.2.wpd

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FILE COPY

December 2, 2005

California Department of Parks & Recreation
Acquisition and Development Division
Attn: Matt Teague, Project Manager
400 Glen Drive
Oroville, California 95966-9222

California Department of Parks & Recreation
Acquisition & Planning Division
Northern Service Center
One Capitol Mall, Ste 500
Sacramento, California 95814

Re: Draft Initial Study/Mitigated Negative Declaration
Big Chico Creek Access to Sacramento River, Draft IS/MND
Bidwell-Sacramento River State Park

Ladies & Gentlemen:

The Sacramento River Reclamation District is a California Reclamation District which includes the area you are describing in the above-entitled Project within its boundaries. The SRRD is a Responsible Public Agency as defined in California Environmental Quality Act.

The Sacramento River Reclamation District previously sent comments to your General Plan - Draft EIR, State Clearinghouse Project 200-3022113. We pointed out in those comments that you had not performed the consultation required with responsible public agencies before preparing a draft environmental document, be it an Environmental Impact Report or an Initial Statement and Negative Declaration. We also pointed out that

To: California Department of Parks & Recreation
Re: Draft Initial Study/Mitigated Negative Declaration
Big Chico Creek Access to Sacramento River, Draft IS/MND
Bidwell-Sacramento River State Park
Date: December 2, 2005

Page 2

there are potentially significant impacts arising from flood flows and diversion of flood flows because of the removal of orchards and the attempt to revegetate those areas with dense vegetation.

The current project involves substantial elevation change and the construction of improvements. This area is part of an area subject to flooding. It is essential to maintaining open space uses, such as agricultural productive uses, that improvements not be installed and vegetation not be allowed to grow in such a fashion that flood water will be diverted, cause erosion, or cause saturation of the soil and delayed drainage after flood events. Our District is involved in assuring that land changes conform to the plan and experience of the District and its landowners and minimize flood effects.

We are indeed disappointed that you did not consult with us prior to commencement of drafting of this document as is required under CEQA. It may well be that after examination, we will conclude that no flood impacts or flow changes will occur under your Plan. However, we do not know that at this point and cannot determine it from your Environmental Impact Statement.

An Environmental Impact Statement and Mitigated Negative Declaration that does not comply with the Responsible Public Agency consultation requirement contained within Title 14, Division 6, Chapter 3 of the California Administrative Code is unlawful. We suggest that you immediately provide us with the following information:

1. A topographical map showing the current contours of the area to be developed in much more detail than the USGS map contained within your Draft IS/MND.
2. Please show us a site map in which we can see exactly what elevation changes are anticipated to occur and what density of vegetation will exist. This area is subject to a rule that if a grading change of more than two feet (2') is proposed, it is subject to a review process.
3. Currently the area consists of largely open space with periodic tree banding. There is no information in regard to the effect on rising and declining flood conditions in the changes you propose. This is essential to include within your description of environmental impacts or the potential of environmental impacts. It is especially

To: California Department of Parks & Recreation
Re: Draft Initial Study/Mitigated Negative Declaration
Big Chico Creek Access to Sacramento River, Draft IS/MND
Bidwell-Sacramento River State Park
Date: December 2, 2005

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important that a flow pattern during declining flood levels in the Sacramento River through grassland areas be maintained so that upslope agricultural lands will quickly drain, allowing the trees and root structure to desaturate. We cannot tell what clearing and maintenance of the vegetation you propose to maintain those flowage patterns from north to south, and from north and east to the west. Particularly, we can see two flow areas on the aerial photographs extending from north to south which appear to have been cleared and maintained to provide flow areas in winter and spring flow conditions where flood or inundation flows can be dewatered from the orchards to the west and north. It is essential that those be maintained in an open condition.

We must say that we are disturbed by the idea that you may be moving forward with an initial study and mitigated negative declaration without completing your description of environmental impacts in conformance with the flood plane regulations and the General Plan that will assure that flood flow patterns within this area will be maintained and that agricultural uses of adjoining and upslope lands will also be maintained because flood flows will not be disrupted. The device that "it's just a boat ramp and some parking spaces" will not work. We expect you to stop the processing until the Responsible Agency Consultation can fully occur, and of course we hope that your plan will turn out not to have any significant impacts. However, because governmental entities are required to comply with these Rules, a hurry to spend public monies is not an excuse.

Very truly yours,

MINASIAN, SPRUANCE,
MEITH, SOARES & SEXTON, LLP

By: 

PAUL R. MINASIAN

PRM:df

cc: Board of Trustees, Sacramento River Reclamation District
S:\Denise\Sacrec\CA Dept of Parks & Rec.1.wpd

**MINASIAN, SPRUANCE,
MEITH, SOARES &
SEXTON, LLP**

ATTORNEYS AT LAW
A Partnership Including Professional Corporations

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OROVILLE, CALIFORNIA 95965-1679

Writer's e-mail: pminasian@minasianlaw.com

PAUL R. MINASIAN, INC.
JEFFREY A. MEITH
M. ANTHONY SOARES
MICHAEL V. SEXTON
DAVID J. STEFFENSON

WILLIAM H. SPRUANCE,
Of Counsel

TELEPHONE:
(530) 533-2885

FACSIMILE:
(530) 533-0197

FILE COPY

FAXED
09/05/06 11:00

September 5, 2006

VIA FAX: (916) 653-1819 (16 pgs.)

Katherine Tobias
California Department of Parks & Recreation
One Capitol Mall, Ste 500
Sacramento, CA 95814

**Re: Big Chico Creek Access to Sacramento River
Bidwell-Sacramento River State Park
Our client: Sacramento River Reclamation District**

Dear Ms. Tobias:

Attached you will find a copy of the Agreement between the County of Butte and Reclamation Board providing for regulation of the area previously proposed to be included within the designated floodway to be administered by the Reclamation Board. Please note paragraph 15 which refers to the formation of the Sacramento River Reclamation District and its role in working with and advising the County in regard to implementation of its regulatory authority.

As we previously discussed with you, the plans of the Department of Parks and Recreation for the boat ramp area may well be totally adequate. The problem is that the Department of Parks and Recreation has not shared with the Sacramento River Reclamation District and therefore, we cannot advise the County of Butte in regard to whether or not a permit is required for the vegetation changes and re-leveling or re-contouring of the adjacent land. As long as the natural flow pattern during flood events is not changed in any substantial way and as the land change or vegetation changes proposed do not form a "levee" by involving a cut or fill greater than three feet or a raising of the natural ground level more than three feet and a change in the drainage pattern, we believe that we can advise the County of Butte Public Works

Katherine Tobias – California Department of Parks & Recreation

Re: Big Chico Creek Access to Sacramento River – Bidwell-Sacramento River State Park

Our client: Sacramento River Reclamation District

September 1, 2006

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Department that either no permit or grading plan approval is required under the delegation to the Sacramento River Reclamation District memorialized in the enclosed contract.

On the other hand, and I do know that we have come to this point, if the Department of Parks and Recreation believes that it can simply make vegetative plantings or changes in the ground surface and improvements which may have an effect upon redirecting flood flows, without approval of either the County of Butte or the Sacramento River Reclamation District, which is the eyes and ears of the County of Butte in regard to this zone, we strongly disagree.

May we please hear from you, so that we may move your projects along.

Very truly yours,

MINASIAN, SPRUANCE,
MEITH, SOARES & SEXTON, LLP

By



PAUL R. MINASIAN

PRM/vlh

Enclosure

cc: Sacramento River Reclamation District
Board of Trustees Members

Department of Public Works
County of Butte

NOV 09 1999

404



INTER-DEPARTMENTAL MEMORANDUM
OFFICE OF BUTTE COUNTY COUNSEL

TO: Board of Supervisors
BY: Neil H. McCabe, Assistant County Counsel *NH*
SUBJECT: Sacramento River Floodplain, Memorandum of Agreement with State Reclamation Board
DATE: November 3, 1999

On October 15, 1999, The Reclamation Board formally approved amendments to the Memorandum of Agreement Concerning Floodplain Management ("MOA"), which was originally entered into in 1995. The amended MOA, which is attached to this memorandum, is now being submitted to your Board for approval. Your Board conceptually approved the principal amendments on June 22, 1999, and the only amendments proposed since then are minor. The discussion below contains further information regarding the MOA and the proposed amendments. A copy of the original MOA is being submitted to the Clerk of the Board so that it will be readily available for public review; please advise if you would also like a copy of the original MOA.

1. MOA History

In November 1995 the County and The Reclamation Board entered into the original MOA. The MOA was the culmination of negotiations commencing in 1988 when The Reclamation Board adopted a 100 year floodway along the Sacramento River. Property owners in the area affected expressed concern regarding the potential effect of the State floodway regulations. The County threatened to commence litigation challenging the adoption of the floodway and alleging non-compliance with the California Environmental Quality Act. The MOA averted litigation.

2. MOA Provisions re Regulations and Local District

One of the requirements of the original MOA was for the County to adopt levee regulations. That requirement has been met. The MOA also contemplated that upon formation of a local reclamation district, the MOA would be assigned to that district, which would assume the County's regulatory function. Formation of the local district, namely, the Sacramento River Reclamation District, has now been approved; however, as discussed below, The Reclamation Board is not agreeing at this time to assign the MOA and the County's regulatory function to the District and has proposed amendments in this regard.

3. MOA Amendments

The proposed amendments are discussed below. The amendments are all incorporated into the new MOA, which will supersede and replace the original MOA. The principal amendments are discussed in subsections A through D below. The other amendments are listed and discussed in subsection E, which refers to each paragraph of the new MOA. Please note that the new MOA contains "Recitals" in numbered paragraphs on pages 1 and 2 and "Text" in numbered paragraphs on pages 2 through 7.

A. Construction of homes.

As we previously reported to you in June of this year, The Reclamation Board had proposed an amendment to the MOA to prohibit the construction of homes in Zone II. However, The Reclamation Board has dropped this proposal. The amended MOA now provides that the County will administer Zone II pursuant to its FEMA NFIP

requirements, which allow homes to be built if flood hazard prevention standards are adhered to. See MOA Text, Paragraph 1 A.

B. Jurisdiction of 20 year floodway.

By May 1998, The Reclamation Board and County staffs had agreed it was desirable to amend the MOA to clarify boundary issues and make it clear that the Reclamation Board would continue to enforce its 20 year floodway regulations even after the adoption of County levee regulations. This was necessary, since the County regulations would apply only in Zone II, which lay to the east of the 20 year floodway, and would not apply within the 20 year floodway itself. The Reclamation Board has approved this amendment. See MOA Text, Paragraph 2.

C. Jurisdiction of "A" and "B" levees.

The amended MOA also provides that The Reclamation Board will retain jurisdiction over portions of the "A" and "B" levees which are outside the 20 year floodway, north of Highway 32 and south of Nord Gianella Road. See MOA Text, Paragraph 6 B.

D. Role of Sacramento River Reclamation District.

Formation of the Sacramento River Reclamation District is acknowledged, but the County shall not delegate its regulatory responsibility to the District without the approval of The Reclamation Board, which is not being given at this time. However, the County may allow the District to have an advisory role to the County in exercising its regulatory authority. See MOA Text, Paragraph 15.

E. List of amendments.

"Recitals" amendments.

Paragraph 1. Clarified to correctly refer to the County's FEMA and Special Building Permit Zone II regulations in existence when original MOA entered into.

Paragraph 2. No change.

Paragraph 3. Amended to reflect that the area subject to the MOA is Zone II, which does not include The Reclamation Board's 20- year designated floodway.

"Text" amendments.

Paragraph 1. Clarified and updated to correctly refer to the current adopted County flood protection regulations and to the procedure followed for adoption of the levee regulations.

Paragraph 2. Updated to reflect that the County has adopted levee regulations, as required by the original MOA. Amended to provide that The Reclamation Board will retain jurisdiction over the 20-year designated floodway.

Paragraph 3. Definition of "permit" amended to include *all* entitlements (not just *discretionary* entitlements) required by Butte County Code Chapter 26, Articles IV and V. Amended to require the County to: submit to The Reclamation Board CEQA documents associated with projects in Zone II; send copies of levee permit applications to the Glenn County Department of Public Works and the Tehama County Flood Control and Water Conservation District; and notify The Reclamation Board if the County intends to issue a permit which requires a variance to the County's floodplain regulations.

Paragraph 4. No change.

Paragraphs 5 and 6 B. Updated to reflect that on the date the County adopted levee regulations for Zone II, namely on July 13, 1999, the 100-year designated floodway within Butte County was deemed rescinded and would be

formally rescinded by The Reclamation Board at its next regular meeting after the County approves the amended MOA. (Portions of the "A" and "B" levees north of Highway 32 and south of Nord Gianella Road, which are within the 100-year floodway, will, however, still be regulated by The Reclamation Board.)

Paragraph 6 A. No change.

Paragraph 7. References to Butte County Code provisions corrected and updated.

Paragraph 8. No change.

Paragraph 9. Both the original MOA and the new MOA contain language requiring The Reclamation Board to conduct annual inspections. However, the new MOA makes the following amendment as indicated with ~~strikeouts~~ and underlining, stating that the purpose of the inspections is to determine whether: "...any encroachments have been permitted, exempted, or otherwise exist that would cause ~~a substantial~~ an obstruction to flood flows." The paragraph is also amended to add requirements: that The Reclamation Board notify Glenn County and Butte County Public Works Departments and the Tehama County Flood Control and Water Conservation District prior to the annual inspections; and that the inspection results be presented to The Reclamation Board at its next regular meeting after completion of the inspection report.

Paragraph 10. The paragraph numbered 10 in the original MOA (which dealt with the procedures to be followed in the event The Reclamation Board was dissatisfied with the content of the County's regulatory procedures) has been deleted.

Paragraph 10 in the amended MOA is the same as Paragraph 11 of the original MOA.

Paragraph 11 in the amended MOA is based upon Paragraph 12 of the original MOA. The cross references in it have been changed to reflect the renumbering which has occurred due to the deletion of Paragraph 10 of the original MOA. In addition, a provision has been added providing that the amended MOA shall supersede and replace the original MOA.

Paragraph 12 in the amended MOA is the same as Paragraph 13 of the original MOA, except for a renumbered cross reference.

Paragraph 13 in the amended MOA is the same as Paragraph 14 of the original MOA.

Paragraph 14 in the amended MOA is the same as Paragraph 15 of the original MOA, except that the name and address of the General Manager for The Reclamation Board have been updated. Note: the FAX number specified for the Public Works Director needs to be corrected to: (530) 538-7683.

Paragraph 15. Replaces paragraph 16 of the original MOA. Acknowledges formation of the Sacramento River Reclamation District but provides that the County shall not delegate its regulatory responsibility to the District without the approval of The Reclamation Board. Provides that the County may allow the District "to have an advisory role to County in County's exercise or its regulatory authority under this Agreement."

Action requested:

Approve the amended Memorandum of Agreement Concerning Floodplain Management and authorize the Chair to sign.

MEMORANDUM OF AGREEMENT
CONCERNING FLOODPLAIN MANAGEMENT

This Memorandum of Agreement is entered into as of _____, 1999 between the County of Butte, State of California (County), and The Reclamation Board, State of California (Board), concerning the management of certain areas that are subject to flooding located within the geographic limits of the County and within the jurisdiction of the Board.

RECITALS

1. County Floodwaters Protection. County has the authority to regulate land uses and to perform floodplain management. Pursuant to that authority, County participates in the National Flood Insurance Program (NFIP) of the Federal Emergency Management Agency (FEMA). To implement that participation, County had adopted a series of ordinances which are codified at Butte County Code, Chapter 26, Article IV. County had also adopted Butte County Code, Section 26-4.1, providing for protection from floodwaters in an unincorporated area of the County adjacent to and east of the Sacramento River, known as Special Building Permit Zone No. II (Zone II). A map showing that area is attached as Exhibit A and incorporated by this reference.

2. Reclamation Board Floodway Designation. Board has the authority pursuant to Section 8609 of the California Water Code and Title 23 of the California Code of Regulations to designate floodways within its geographic area of jurisdiction, which includes the County of Butte. The Board in 1974 adopted a designated floodway on the Sacramento River within Butte, Glenn, and Tehama Counties, the boundaries for which were the limits of the 20-year flood event (Board 20-year designated floodway). The Board in 1988 adopted a designated floodway on the Sacramento River within Butte, Glenn, and Tehama Counties, the boundaries for which were based on an engineering study, conducted by the Board, of the limits of the 100-year flood event (Board 100-year designated floodway). The boundaries of the 100-year designated floodway were larger than and included the boundaries of the 20-year designated floodway. County has challenged the Board's 1988 action. The attached map, Exhibit B, shows the Board's 20-year and 100-year designated floodways and is incorporated by this reference. The boundaries of Board's said 100-year designated floodway are similar and in some instances identical to the boundaries of the County's Zone II.

3. County and Reclamation Board Objective. County and Board share the objective of having a single entity exercise floodplain management authority in the area within the limits of the County's Zone II, and outside the boundary of the Board's 20-year designated floodway in order to most effectively control encroachments into the floodplain and provide the most efficient attempt to prevent unnecessary injury to persons and flood damage to property caused by alteration of land conditions.

TEXT

1. County Administration of Zone II: Regulatory Procedures.

- A. Content of Regulatory Procedures. County will continue to administer Zone II pursuant to the provisions of Article IV of Chapter 26 of the Butte County Code and will meet or exceed the requirements of the NFIP. In administering Zone II, the County has also adopted and codified at Butte County Code, Chapter 26, Article V, regulatory procedures, including an appeal procedure, which include the review of permit applications, the grant or denial of permits for the construction of new levees, and the enforcement of regulatory procedures for existing levees. Said procedures repealed and replaced Butte County Code, 26-4.1. As used in this Agreement, the word "levee" excludes all of the following:

- (1) building pads of any height;
- (2) crop checks, ditch banks or ditch pads, that are less than three feet in height above natural ground; and
- (3) private road fills or embankments, including driveways, that meet all of the following conditions: (a) are less than one-quarter mile in length; (b) are less than three feet in height above natural ground; and (c) do not impede the flow of a natural watercourse or constructed overflow channel associated with a natural watercourse.

The County's regulatory procedures attempt to assure that substantial obstructions to or adverse effects on floodflows within Zone II are avoided. The regulatory procedures identify a method of administering areas of flood depths of greater than one foot within Zone II. The regulatory procedures call for Board staff to comment upon permit applications and enforcement procedures.

B. Process for Review and Approval of Regulatory Procedures. Board staff provided assistance to County staff, on County's request, in drafting the content of the regulatory procedures. County did, at least thirty (30) days prior to giving notice of its intent to adopt the regulatory procedures, provide the Board staff with a copy of the proposed regulatory procedures. Board staff notified County in writing of Board staff's comments, with a statement of reasons and suggested revisions. Such comments were considered in good faith by County prior to taking action on the proposed regulatory procedures.

2. County Adoption of Regulatory Procedures: Continuing Board Jurisdiction. Notwithstanding the County's adoption of regulatory procedures, the Board will continue to exercise jurisdiction over encroachments within the Board's 20-year designated floodway, based on the Board's Regulations (California Code of Regulations Title 23). The County will direct any individual seeking a County permit to construct, repair, remove, or otherwise alter any structure within the 20-year designated floodway to the Board to obtain a permit.

3. Permit Applications. For purposes of this Agreement, the term "permit" means an entitlement to use for which express County approval, or an exemption from approval, is required and to which Butte County Code Chapter 26, Articles IV and V, apply. All applications for permits within Zone II, including applications for County projects, will be forwarded via facsimile and first class mail to the Board as provided in paragraph 14 of this Agreement for comments not less than ten (10) working days before the County acts either to approve or deny the application. County will also send Board all California Environmental Quality Act (CEQA) documents associated with proposed projects within Building Zone II. The CEQA documents will be sent to the Board at the beginning of the public comment period. Environmental documents will be sent to the Board in a timely fashion. County will also send copies of permit applications for levees to the Department of Public Works of Glenn County and to the Tehama County Flood Control and Water Conservation District. Board will cooperate with County in reviewing permit applications and making comments and recommendations to County. Comments and recommendations shall be limited to the issues of consistency with FEMA floodplain management criteria, as set forth in the County Code, and with sound floodplain management practice. In order to be considered by County, all comments and recommendations must be received by County within ten (10) working days of being sent to Board by facsimile. If a permit is issued in response to the application, a copy of the permit will be forwarded to the Board for its information. The decision to grant or deny a permit shall be made solely by the County. County will inform the Board in writing of its intent to issue a permit which requires a variance to County's floodplain

regulations at least 30 days prior to the issuance of the permit.

4. Approval of Agreement. Board will consider approval of this Agreement by formal action at a noticed open meeting of the Board. If Board fails to approve this Agreement at such a meeting, then County may proceed with any cause(s) of action against the Board concerning which the Board has previously agreed to waive the statute of limitations. Board's approval of this Agreement is a waiver of the statute of limitations until the events in paragraph (5) take place.
5. Rescission of Butte County Portion of 100-Year Designated Floodway. Effective on the date the County adopted Butte County Code Chapter 26, Article V, as specified in Paragraph 1. of this Agreement, namely on July 13, 1999, that portion of the Board's 100-year designated floodway that lies within Butte County shall be deemed rescinded and of no further effect, except as provided in paragraph 6(B) of this Agreement. In addition, except as provided in paragraph 6(B) of this Agreement, Board shall formally rescind the 100-year designated floodway within Butte County at the next regular meeting of the Board after the date on which County approves this Agreement. On the date of Board's formal rescission, the County will be deemed to have waived any cause(s) of action against the Board and the State of California arising out of the Board's adoption in 1988 of the 100-year designated floodway.
6. Remaining Designated Floodways.
 - A. Nothing in this Agreement shall affect the validity or enforceability of either (1) those portions of Board's 100-year designated floodway that lie within Glenn or Tehama Counties, or (2) those portions of the Board's 20-year designated floodway within Glenn and Tehama Counties. Board will continue to enforce those portions of the Board's 100-year designated floodway and 20-year designated floodway that lie within Glenn and Tehama Counties. Board reserves the right to enter into agreements with Glenn and Tehama Counties that provide terms similar to those in this Agreement, delegating its authority to them to enforce these designated floodways within their respective jurisdictions.
 - B. Board will not enforce those portions of Board's 100-year designated floodway that lie within Butte County north of Big Chico Creek, except as provided in this paragraph, 6(B). Nothing in this Agreement shall affect the validity of those portions of the Board's 20-year designated floodway within Butte County. Board will continue to enforce those portions of the Board's 20-year designated floodway that lie within Butte County. Notwithstanding any other provision of this Agreement, the Board will retain jurisdiction over all

portions of the "A" and "B" levees located in Butte County, north of Highway 32 and south of Nord Gianella Road, that fall outside the boundary of the 20-year designated floodway as shown on the attached map, Exhibit C, incorporated by this reference and within the boundary of the 100-year designated floodway.

7. Amendments to Chapter 26, Articles IV and V of the Butte County Code. At such time as the County intends to amend Chapter 26, Articles IV and V, of the Butte County Code, to otherwise amend the Butte County Code concerning floodplain management, or to change the land use or zoning classification or the boundaries of Zone II (through changes to zoning ordinances, the general plan or otherwise), County will provide not less than thirty (30) days notice in writing to the Board of the first public hearing at which any of the above actions are to be considered by the County Board of Supervisors, the County Planning Commission, the County Advisory Agency, or any other body or commission under the control of the County Supervisors. The Board may make recommendations to the County and the County will consider the Board's position in making decisions. The County is not required to discuss with the Board any amendment to its ordinances or the County Code that is required by FEMA pursuant to the NFIP, but the County will provide the notice stated above of any such proposed amendment.
8. Notification of Intended Activity Within Zone II. In the event that the County learns that a district, or State or federal agency intends to conduct some activity within Zone II that could have an impact on floodplain management, and the County believes it may be without jurisdiction to regulate that activity or for other reasons does not intend to regulate that activity, County will timely notify the Board of the activity and the County's intent not to regulate the activity. In that event, notwithstanding provisions to the contrary in this Agreement that the Board will not exercise its jurisdiction or otherwise assert its authority or the applicability of its rules and regulations within Zone II, the Board may exercise its jurisdiction under Water Code Section 8710 to require an application for an encroachment permit from the Board.
9. Annual Inspection of Area Within Zone II. The Board will conduct an annual inspection of the area within Zone II in order to determine whether any encroachments have been permitted, exempted, or otherwise exist that would cause an obstruction to floodflows. Board will notify County in advance of the date, time, and starting location of the inspection. Board will also notify Glenn County Public Works, Tehama County Flood Control and Water Conservation District, and Butte County Public Works of the date, time, and starting location of the inspection. County has the right and is encouraged to participate. Board staff will prepare a brief written inspection report documenting each

annual inspection within thirty (30) days of such inspection and will present the results of that report to the Board at its next regular meeting after completion of the report. The report will be in the form of a letter to the County Director of Public Works. A copy of each report will be provided to the Department of Water Resources' Northern District and Statewide FEMA Coordinator, for use in their program of Community Assistance Visits.

10. Informal Dispute Resolution. In the event that any dispute arises over the terms or implementation of this Agreement, Board staff will refer the issue to the Board General Manager, and County staff will refer the issue to the Director of Public Works. Those individuals will make a good faith attempt at informal resolution. The attempt will include a clear identification of the significant facts, the issue on which the parties differ, and the perceived obstacles to resolution. If that does not resolve the issue, then the issue will be referred to the County Counsel and Board Counsel who will, at a minimum, discuss the issue by telephone. In no event shall a dispute over the terms of implementation of this Agreement be referred to the County Board of Supervisors or The Reclamation Board for action prior to compliance with the above-stated steps toward informal resolution.
11. Effective Date. This Agreement is effective upon the date of last execution by the parties. The term of the Agreement is from its effective date until terminated pursuant to paragraphs 10 and 12. Upon the effective date of this Agreement, it is mutually agreed that it shall supersede and replace the Memorandum of Agreement Concerning Floodplain Management dated November 17, 1995.
12. Termination. This Agreement may be terminated by either party at any time and for any reason after compliance with paragraph 10 and upon thirty (30) days written notice of proposed formal action at a public meeting by the party who has given notice of termination.
13. Amendment. This Agreement may be amended at any time by mutual consent of the parties.
14. Notices. Written notices pursuant to this Agreement shall be given to the following:

For the County:

Director of Public Works
7 County Center Drive
Oroville, California 95965
Fax: (530) 538-2140

AND:

Director of Development Services
7 County Center Drive
Oroville, California 95965
Fax: (530) 538-7785

For the Board:

Peter D. Rabbon, General Manager
The Reclamation Board
1416 Ninth Street, Room 1601
Sacramento, California 95814
Fax: (916) 653-5805

15. Formation of Sacramento River Reclamation District.
The parties acknowledge formation of the Sacramento River Reclamation District; however, Butte County shall not delegate its responsibility for regulating floodplain management within building Zone II, under the terms of this Agreement, to said District without the approval of the Board. County may, at its discretion, allow said Reclamation District to have an advisory role to County in County's exercise of its regulatory authority under this Agreement.

APPROVED:

APPROVED:

Board of Supervisors
County of Butte

The Reclamation Board
State of California

By _____
Jane Dolan, Chair

By _____
Barbara LeVake, President

Dated _____

Dated _____

APPROVED AS TO FORM:

APPROVED AS TO FORM:

By _____
Neil H. McCabe
Assistant County Counsel
County of Butte

By _____
Claire Priestley LeFlore
Legal Counsel
The Reclamation Board

SUBSTITUTE SHEET FOR
EXHIBIT "A" TO
FLOODPLAIN MANAGEMENT AGREEMENT

Exhibit "A" to the Memorandum of Agreement Concerning Floodplain Management between The Reclamation Board and The County of Butte, dated _____, is a blueline map showing the County's Special Building Permit Zone No. II as a shaded area superimposed on the U.S. Army Corps of Engineers' 1960 map of floodway limits on the Sacramento River, Corps file No. 50-10-3638.

Originals of Exhibit "A" are on file: with the original Agreement in the Records Management unit of the Department of Water Resources in Sacramento; and with the Butte County Department of Public Works in Oroville.

SACRAMENTO RIVER RECLAMATION DISTRICT

2020 Esplanade
Post Office Box 257
Chico, California 95927-0257
(530) 891-1493

Bill Wagershauser, President • Shirley Lewis, Vice President
Richard Wright, Treasurer • Peter D. Peterson
Jim Paiva • Roy Roney • Donald O'Dell

Paul R. Minasian, Acting Secretary & District Counsel
(P. O. Box 1679, Oroville, California 95965 (530) 533-2885 • fax (530) 533-0197)

April 13, 2005

FILE COPY

The Nature Conservancy
500 Main Street, Suite B
Chico, California 95928

Via facsimile (530) 342-0257

Bidwell River State Park
12104 River Road
Chico, California 95926

Re: Acquisition of George Nicholas property

Ladies & Gentlemen:

We have been informed by George Nicholas that you are moving forward in regard to the acquisition of his property. As we have repeatedly asked, we believe that a plan for vegetation maintenance and management which will continue to allow these properties to serve as flood overflow and passage areas is an essential condition for their acquisition to avoid environmental impacts. The Sacramento River Reclamation District stands ready to meet with you and discuss this subject and to develop a plan in a recordable form which will provide the greatest assurance that these properties as well as the neighboring properties will not be damaged as a result of termination as farming properties either immediately or in the future.

Very truly yours,

SACRAMENTO RIVER RECLAMATION DISTRICT

Board of Directors
By PAUL R. MINASIAN, Acting Secretary

PRM:df

cc: Board of Trustees, Sacramento River Reclamation District
S:\Denise\Sacred\Nature Conservancy.1.wpd



**BUTTE
COUNTY
FARM BUREAU**

Serving Agriculture For More Than 80 Years

September 25, 2007

Mrs. Denise Reichenberg
Superintendent – Valley Sector
California State Parks
525 Esplanade
Chico, California 95926

Dear Mrs. Reichenberg,

The Butte County Farm Bureau (BCFB) would like to submit the following comments for the proposed Bidwell-Sacramento River State Park: Habitat Restoration and Outdoor Recreation Facilities Development Project (Project).

It is the opinion of the BCFB that state, local and federal agencies should not acquire agricultural land for the purpose of fish, wildlife, and habitat protection or public recreation. Furthermore we also believe the definition of "recreational activities" as defined under the California Land Conservation Act (Williamson Act), should exclude uses that result in the cessation of agricultural pursuits on contracted land or that have negative impacts on adjacent agricultural lands.

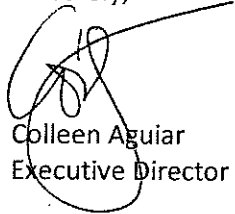
According to the Butte County Department of Development Services, a significant portion of the Project is currently listed under the Williamson Act. Again, it is the opinion of the BCFB that Williamson Act contracted land should not be acquired by a government entity or joint powers authority to expand parks or wildlife refuges. These uses are incompatible with the continued agricultural use of surrounding agricultural properties.

Additionally it should be noted that according to the Butte County Right to Farm Ordinance (35-2(b)), "Where nonagricultural land uses extend onto agricultural land or exist side by side with agricultural operations, agricultural operations are frequently the subject of nuisance complaints. As a result, some agricultural operations are forced to cease or curtail their operations and many others are discouraged from making investments in improvements to their operations, all to the detriment of adjacent agricultural uses and the economic viability of the county's agricultural industry as a whole. It is the purpose and intent of this chapter to reduce the loss to the county of its agricultural resources by limiting the circumstances under which properly conducted agricultural operations on agricultural land may be considered a nuisance."

As a result of the above comments, it is the opinion of the BCFB that the Project would not benefit the proposed area location and will only create a negative impact to the economic viability of the surrounding agricultural properties.

Should you require further explanation of the above comments, please contact us at (530) 533-1473 or at buttecfb@sbcglobal.net. We thank you for the opportunity to comment on this proposed project.

Sincerely,

A handwritten signature in black ink, appearing to be 'Colleen Aguiar', written over a circular stamp or seal. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Colleen Aguiar
Executive Director

Reichenberg, Denise

From: Lisa Mendonca [lisalinguisa04@yahoo.com]
Sent: Thursday, September 27, 2007 9:44 PM
To: Reichenberg, Denise
Subject: Bidwell-Sacramento River State Park

Name: Don Mendonca

Organization: Mendonca Orchards Inc.

Address: 3685 Chico River Road

City, State, Zip: Chico, CA 95928

-I own the property on the conner of West Sacramento and River Road (North of West Sac, East of River Road)

Comments:

1. More ground and tree squirrel problems.
2. More beaver problems (as many as 50 trees lost in one year).
3. Deer eating on newly planted trees has been getting worse and will get even worse with the proposed project.
4. Fencing field is not an option due to flooding.
5. Drainage of flood water will be worse with Nicholaus and Singh planted for habitat. The Singh property and property to the south which is supposed to drain into Big Chico Creek has built up with silt over the years. This has caused water to stay in the fields rather than drain to the creek. This causes more problems for crops grown there not to mention mosquito breeding (thus causing West Nile issues).

Don't let your dream ride pass you by. Make it a reality with Yahoo! Autos.

Reichenberg, Denise

From: Jacqueline Matthews [JMatthews@waterboards.ca.gov]
Sent: Friday, September 28, 2007 9:18 AM
To: Reichenberg, Denise
Cc: Suzanne.Enslow@edaw.com; rluster@TNC.ORG; Mary Randall; Scott Zaitz
Subject: Re: NOP

Denise-

Thank you for the information yesterday. The Regional Water Board is interested in the discharge of wastewater to land. My understanding is that there will be wastewater from toilets, showers, and an RV dump station. Will there be a vehicle wash area, maintenance/shop area, and/or fish cleaning station that will contribute to wastewater flows? The documents did not specify the method(s) of treatment for the wastewater and how it will be disposed of (i.e. leachfield, etc.). The documents you sent yesterday make reference in the Utilities Section to a wastewater treatment plant; what does this mean? Our office is interested in the types of wastewater streams, the volumes of the flows, and the treatment and disposal of the wastewater. The Regional Water Board has regulatory oversight of domestic wastewater once flows reach a certain daily amount. If it is determined that the Regional Water Board is the regulatory authority for the project, you will need to obtain Waste Discharge Requirements (WDR) from our office. To obtain WDRs, you must submit an application called a Report of Waste Discharge (ROWD) to our office. Please note that the discharge of wastewater to the surface shall not occur until WDRs are adopted, and statutorily the Regional Board has 140 days to issue WDRs once a ROWD, deemed complete by the Regional Board, is received.

The project may also need a construction storm water permit and/or a 401 certification; the contact person for these two items is Scott Zaitz (530) 224-4784.

Construction Storm Water Permit

Based on the project description, it appears that grading and/or other soil disturbing activities may occur. In order to protect water quality during construction, appropriate storm water pollution control measures must be implemented. If construction activities result in a land disturbance of one or more acres, the project will need to be covered under the General Construction Storm Water Permit (Order No. 99-08-DWQ). The permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared prior to construction activities. The SWPPP is used to identify potential pollutants (such as sediment and earthen materials, chemicals, building materials, etc.) and to describe best management practices that will be utilized to eliminate or reduce those pollutants from entering surface waters. The Construction Storm Water Permit can be obtained from the Regional Water Quality Control Board (Regional Board) office or website: www.waterboards.ca.gov/stormwtr/construction.html. For more information on the Construction Storm Water Permit, please contact Scott Zaitz at (530) 224-4784.

Army Corps of Engineers and State Water Quality Certification The proposed project may require a \$404 permit from the U.S. Army Corps of Engineers and \$401 Water Quality Certification from the Regional Board. The Federal \$404 Permit is required for activities involving a discharge (such as fill or dredged material) to waters of the United States. "Waters" include wetlands, riparian zones, streambeds, rivers, lakes, and oceans. Typical activities include any modifications to these waters, such as stream crossings, stream bank modifications, filling of wetlands, etc. These projects also require a water quality certification (per \$401 of the Clean Water Act) verifying that the project will not violate state water quality standards. If required, the \$404 permit and water quality certification must be obtained prior to site disturbance. The Army Corps of Engineers contact for Butte County is Mr. Brian Vierria (916) 557-7728. An application for the \$401 Water Quality Certification is available from our office or website: www.waterboards.ca.gov/centralvalley/programs/WaterQualityCert.

Please include myself on correspondence regarding the project. If you have any questions regarding the above info, please give me a call and we can discuss it in further detail. Good luck with the project.

Jacqueline M. Matthews
Environmental Scientist
Regional Water Quality Control Board, Redding
(530) 224-3249

>>> "Reichenberg, Denise" <dreichenberg@parks.ca.gov> 9/27/2007 10:00 AM
>>> >>>

Hi Jacqueline,

Here is the document I spoke of on the phone today. Remember it is a concept of the project and will likely change in design as we gather more information on the site. I have copied this email to Ryan Luster from The Nature Conservancy. TNC still owns the Nicolaus parcel and has plans to give it to State Parks in the near future.

We are still in the comment stage of the public review process. I look forward to receiving your comments on the project from the Regional Water Control Boards perspective. We will review the comments and include the information in the next phase of our EIR review process. Another public meeting will be held when our studies and document have been completed.

I have also copied Susanne Enslow from EDAW who is the project leader with our document preparation.

Thank you for your phone call,

Denise Reichenberg
Sector Superintendent I
Northern Buttes District/Valley Sector
California State Parks
Phone (530) 895-4304
Fax (530) 895-6699

Reichenberg, Denise

From: John Merz [jmerz@sacrivertrust.org]
Sent: Friday, September 28, 2007 3:54 PM
To: Reichenberg, Denise
Cc: Foster, Robert; Fehling, Mike; Elliott, Woody; Gregg Werner; beverley anderson-abbs
Subject: B-SRSP Habitat Restoration Project

Hi, Denise:

In regards to the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project, the Trust would like to add to our scoping comments the following:

- 1) That the potential need to reroute River Road so that it is set back further from the Sacramento River be addressed, with Butte County Public Works a key player in that discussion; and,
- 2) That the Draft Environmental Assessment/Initial Study for the M&T Chico Ranch/Llano Seco Rancho Pumping Plant Maintenance of Channel Alignment River Mile 192.5 dated August, 2007, be incorporated into the environmental analysis as appropriate (see #1 above).

Should you have any questions, please don't hesitate to ask.

Sincerely,

John Merz
President
Sacramento River Preservation Trust
P.O. Box 5366
Chico, CA 95927
(530) 345-1865
jmerz@sacrivertrust.org

**DEPARTMENT OF TRANSPORTATION
DISTRICT 3**

703 B STREET
P. O. BOX 911
MARYSVILLE, CA 95901-0911
PHONE (530) 741-4025
FAX (530) 741-5346
TTY (530) 741-4509



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Bidwell- Sacramento River State Park: Habitat Restoration and Outdoor
Recreation Facilities Development Plan
Notice of Preparation (NOP)
SCH 2007082160

Ms. Denise Reichenberg
Superintendent- Valley Sector
California State Parks
525 Esplanade
Chico, CA 95926

Dear Ms. Reichenberg,

Thank you for the opportunity to review the Notice of Preparation (NOP) for the Bidwell- Sacramento River State Park (BSRSP): Habitat Restoration and Outdoor Recreation Facilities Development Plan. The proposed project is to implement the development plan mentioned above for two parcels. One parcel, the "Singh Unit," is an existing part of the BSRSP and the second, "Nicolaus," is a parcel that is being transferred from The Nature Conservancy to the BSRSP. The recreation facility project will involve the creation and expansion of hiking and camping facilities.

Please forward additional information for us to review that includes the number of additional campsites and the extent of new facilities that will be developed.

If you have any questions regarding these comments, please contact Matt Friedman, Local Development/ Inter-Governmental Review Coordinator, at (530) 741-4004.

Sincerely,

A handwritten signature in black ink, appearing to read "Sue Takhar".

SUKHVINDER (SUE) TAKHAR, CHIEF
Office of Transportation Planning-North

Responses to Scoping Comments

A RESPONSES TO SCOPING COMMENTS

Numerous environmental issues were identified during the scoping process for the proposed Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project. The issues raised during the scoping period have been addressed by incorporating appropriate measures into the project description or have been addressed in the analysis of environmental effects in the Draft EIR. The table below provides a full list of the scoping comments provided on the project and a description of how each comment was addressed in this EIR.

Scoping Comments and Responses	
Scoping Comment	How it has Been Addressed in the EIR
<p>1 The proposed grassland buffers in the habitat restoration plans, between restored areas and adjacent private agricultural lands, should be greater than 100 feet. The adjacent private land owners feel the buffer should be at least 300–500 feet.</p>	<p>The proposed grassland buffer, as discussed in Chapter 3, “Description of the Proposed Project,” and illustrated in Exhibits 3-7 and 3-8, would be approximately 100-foot wide and would be maintained by State Parks. The grassland buffers would be managed to prevent woody species establishment.</p> <p>The proposed habitat restoration plans do not include planting any threatened or endangered plant species. Therefore, a large grassland buffer is unnecessary to prevent encroachment of such species onto private property. Additionally a large grassland buffer is unnecessary to protect the restoration area from spray-drift from adjacent agricultural activities. Furthermore, open grass areas may provide habitat for pests such as California ground squirrel, California vole, and lygus bug (aka western tarnish bug) as opposed to closed canopy riparian habitats (e.g., riparian forests) (Colusa Pest and Regulatory Effects Study; EDAW 2007). Therefore, the proposed grassland buffers in the habitat restoration plans would remain approximately 100 feet wide.</p>
<p>2 There is a slough that runs through the Singh Unit, which is currently silted in and backing up water onto the private property to the north. The berms on the Singh Unit were from past clearing of the slough, which no longer occurs. The private land owner to the north is concerned about riparian forest habitat in the slough area because of the potential to back up water onto their property. The neighboring private land owner would prefer to see an open grassland area in the slough to allow for the flow of water through the project site.</p>	<p>The proposed habitat restoration plans, discussed in Chapter 3, “Description of the Proposed Project, illustrated in Exhibits 3-7 and 3-8, and discussed in greater detail in Appendix C, were developed based on the Flood Neutral Hydraulic Analysis for the Nicolaus property and Singh Unit (Appendix B) as well as input from the private land owner. Due to the private land owner’s concerns regarding the slough on the Singh Unit, an additional Hydraulic Model run was completed in November 2007. Based on the modeling results, the restoration plans for the Singh Unit were revised to provide a flow-through area. This final plan is reflected throughout this DEIR.</p>
<p>3 The land owner of the parcel between the Singh Unit and Nicolaus property believes that removal of the berm near Mud Creek would be beneficial for drainage of the project site and their property.</p>	<p>The proposed habitat restoration plans, discussed in Chapter 3, “Description of the Proposed Project, illustrated in Exhibits 3-7 and 3-8, and discussed in greater detail in Appendix C, include removal of the berm near Mud Creek on the Singh Unit.</p>

Scoping Comments and Responses

Scoping Comment	How it has Been Addressed in the EIR
4 Topography and groundwater need to be considered in the restoration plans and in the hydrologic analyses.	The proposed habitat restoration plans, discussed in Chapter 3, “Description of the Proposed Project, illustrated in Exhibits 3-7 and 3-8, and discussed in greater detail in Appendix C, were developed based on the Flood Neutral Hydraulic Analysis for the Nicolaus property and Singh Unit (Appendix B). The hydraulic analysis and the restoration plans took into account topography and groundwater, and appropriate vegetation for the soil and groundwater conditions have been chosen for the project.
5 Will the project sites be fenced? The adjacent private land owners would like a fence to discourage trespassing and make the park boundary clear, but want to ensure that the fence is designed to not capture or back up debris during flood events.	The project sites would not be fenced. However, the boundaries between the project site, which would be part of State Park’s BSRSP, and private property would be clearly posted, consistent with Guideline AO-1.1-2 and AO-4.4-1 of the Park Plan. Additionally, the proposed trails on the Nicolaus property and Singh Unit would be no closer than 100 feet from private property boundaries.
6 Neighboring private land owners are concerned about pests and invasive species negatively impacting their agricultural production (such as black walnut volunteers bringing walnut husk fly, squirrels and rodents, deer, mosquitoes, and beaver).	An approximately 100-foot grassland buffer is planned at the northern and southern boundaries of the Nicolaus property as well as at the northern boundary of the Singh Unit, where the project site is directly adjacent to private agricultural land. The grassland buffer would managed to discourage encroachment of brush and tree species. However, open grass areas may provide habitat for pests such as California ground squirrel, California vole, and lygus bug (aka western tarnish bug) as opposed to closed canopy riparian habitats (e.g., riparian forests) (Colusa Pest and Regulatory Effects Study; EDAW 2007). Therefore, the proposed grassland buffers in the habitat restoration plans would not be greater than approximately 100 feet wide.
7 Neighboring private land owners are concerned about people trespassing on their properties from the project sites.	The boundaries between the project site, which would be part of State Park’s BSRSP, and private property would be clearly posted, consistent with Guideline AO-1.1-2 and AO-4.4-1 of the Park Plan. Additionally, the proposed trails and recreational facilities on the Nicolaus property and Singh Unit would be no closer than 100 feet from private property boundaries. Furthermore, as part of BSRSP, the project site would be managed and maintained consistent with the Park Plan goals and guidelines, including coordinating with public and private landowners in the project vicinity to minimize land use conflicts (Park Plan Overall Goal AO-4).
8 The hydrologic model used to analyze the proposed project should be peer reviewed to ensure accuracy.	The Flood Neutral Hydraulic Analysis for the Nicolaus property and Singh Unit is included as Appendix B of this DEIR. Independent review of this analysis occurred during preparation of Section 4.3, “Hydrology, Water Quality, and River Geomorphology,” of this DEIR (by EDAW Inc.). In addition, the hydraulic analysis may be further reviewed during the mandatory DEIR public and agency review period.
9 The EIR should provide a detailed project description, including all on/offsite project elements.	Please see Chapter 3, “Description of the Proposed Project,” for the detailed project description. Additional information on the hydraulic modeling, the restoration plans, and the recreation facilities plans is also provided in Appendices B, C, and D of this DEIR.

Scoping Comments and Responses		
	Scoping Comment	How it has Been Addressed in the EIR
10	The EIR should describe surrounding land ownerships in the project area.	Surrounding land ownership is discussed in Chapter 3, "Description of the Proposed Project," and illustrated in Exhibit 3-6.
11	The EIR should adequately analyze the potential impacts to wildlife due to the project, including the potential impacts of trails (e.g., habitat fragmentation) and increased human use and activities in the natural areas.	Please see Section 4.4, "Biological Resources," which analyzes the potential project effects on vegetation, wildlife, and fisheries.
12	The EIR should identify cumulative projects and analyze the potential cumulative impacts of the project in combination with other projects planned upstream and downstream (i.e., place the project in the context of what is occurring in the region).	Please see Chapter 5, "Cumulative Impacts," which identifies cumulative projects and analyzes potential cumulative effects associated with the proposed project and cumulative projects.
13	The EIR should include a description of the Memorandum of Understanding (MOU) between State Parks, U.S. Fish and Wildlife Service, and the California Department of Fish and Game, established in 2001.	Please see Section 4.2.2, "Agricultural Resources, Regulatory Setting," for a description of the Memorandum of Understanding (MOU) between State Parks, U.S. Fish and Wildlife Service, and the California Department of Fish and Game established in 2001. It applies to lands within the Sacramento River National Wildlife Refuge (SRNWR) (owned by USFWS), Sacramento River Wildlife Area (SRWA) (owned by DFG) and State Parks, and includes future property acquisitions. The MOU formally documents the agreement between these public land management agencies to manage, monitor, restore and enhance lands managed for fish, wildlife and plants along the Sacramento River in Tehama, Butte, Glenn, and Colusa counties. It also prevents duplicative land management and property acquisition efforts.
14	The EIR should include a description of all of the key players related to habitat restoration and management.	Please see Section 3.3.1, "Local and Regional Conservation Planning," in Chapter 3, "Description of the Proposed Project."
15	Will the recreational and camping facilities be raised? How much ground disturbance/movement will be required?	Please see "Public Access and Outdoor Recreation Specifications" in Chapter 3, "Description of the Proposed Project." The proposed project would involve the removal of human made berms (Exhibit 3-7) on the Singh Unit and grading to match the natural topography after removal of the orchards on both the Singh Unit and the Nicolaus property. The recreation facilities would be placed on raised pads as necessary.
16	Who will pay for the costs of implementing the project and for upkeep/law enforcement of the project sites?	Please see "Law Enforcement" in Chapter 3, "Description of the Proposed Project." Law enforcement services are provided concurrently by State Parks and local law enforcement agencies, namely Butte County Sheriff Department for the portion of BSRSP in Butte County. Park security is the primary responsibility of the Park Ranger serving the Park.
17	Are there 24 hour patrols of the Bidwell-Sacramento River State Park?	There are not 24-hour patrols in BSRSP, but there is a 24-hour call-in line.

Scoping Comments and Responses		
	Scoping Comment	How it has Been Addressed in the EIR
18	There is concern about illegal use of park facilities.	Please see “Law Enforcement” in Chapter 3, “Description of the Proposed Project.” Consistent with the Park Plan Goal AO-4.4, State Parks will work with private landowners in proximity to BSRSP to minimize conflicts associated with the mixed public and private land ownership in the area.
19	Can State Parks rangers enforce the law on private property?	Yes, State Parks rangers can and will enforce the law on private property as necessary.
20	Will the campsites be pay campsites?	Yes, the campsites would be pay campsites. Campers would check in/out with the ranger, and the ranger would monitor the campsites.
21	Will there be proper fire protection and controls on the project sites?	Yes, please see “Fire Protection” in Chapter 3, “Description of the Proposed Project.”
22	How will the restrooms and dump station be designed to avoid leaking and contaminating adjacent properties, especially during flood events?	Please see “Public Access and Outdoor Recreation Specifications” in Chapter 3, “Description of the Proposed Project.” The existing septic system/leachfield would be used to service the relocated Park headquarters, which is above normal flood stage. A new septic system/leachfield would be installed to service the combination restroom/shower building. Vault toilets and RV dump station could be sealed when necessary and would be pumped by a local contractor.
23	Will the ground water wells on the properties be abandoned?	The existing ground water wells on the Singh Unit and Nicolaus property would be utilized for irrigation of the habitat restoration (for three years) and used for the recreation facilities and relocated Park headquarter until they are no longer useable. At such time, they would be abandoned per State and Butte County regulations.
24	Are there Williamson Act Contracts on the properties? If so, what is the process for cancellation?	Yes, there is a Williamson Act Contract for the Nicolaus parcel. There is no contract for the Singh Unit. Please see Section 4.2, “Agricultural Resources,” of this DEIR for a discussion of the Williamson Act, the process for ending an existing contract, and an analysis of the project-related agricultural impacts.
25	Has there been a survey of the property lines for the two project sites?	No, a formal survey of the project site property lines has not been completed.
26	There is an above ground fuel tank, not an underground fuel tank on the Nicolaus property. This needs to be addressed in the environmental document.	Please see Section 4.1, “Issues Tiered from the General Plan EIR,” for a discussion of hazards and hazardous materials. Phase I Hazardous Materials Site Assessments were completed for both the Nicolaus property and the Singh Unit, which found that site conditions do not warrant further investigation.
27	Concern that if cottonwoods are planted or grow on the project sites, they may encroach on Mud Creek and impede flow.	The proposed restoration plans do not include any activities in or on the banks of Mud Creek. There are existing cottonwoods in the surrounding remnant forests, which would remain. It is the responsibility of the Department of Water Resources to maintain Mud Creek conveyance.
28	The environmental document needs to address the potential increase in traffic and impacts to River Road due to the proposed project.	Please see Section 4.1, “Issues Tiered from the General Plan EIR,” for a discussion of potential project impacts related to traffic and circulation.
29	How would issues between State Parks and neighboring land owners be resolved?	Consistent with Park Plan Goal AO-4.4, State Parks will work with private landowners in proximity to the Park to minimize

Scoping Comments and Responses	
Scoping Comment	How it has Been Addressed in the EIR
	conflicts associated with the mixed public and private land ownership pattern in the area. This includes following Guidelines AO-4.4-1 through 3 to delineate Park boundaries, review proposed facilities in the context of adjacent land uses, and implementing resource enhancement in a manner that takes into consideration adjacent land uses.
30 Permits may be necessary from the Regional Water Quality Control Board.	State Parks will coordinate with the Regional Water Quality Control Board regarding potential approvals/permits for the proposed project as necessary.
31 Will there be additional opportunities to provide input/review of the project?	Please see Section 1.6, "Public Review Process," of this DEIR. This DEIR is being circulated for public review and comment for a period of 45 days and a public hearing is being held.
32 The public requested to have thorough and easily accessible public notices about the project, environmental documents, and opportunities for public comment. It was recommended that notices be provided on the State Parks website, the TNC website, SRCAF, and in local publications in both Butte and Glenn counties.	Notices regarding availability of the DEIR for public/agency review will be provided through the State Clearinghouse, the State Parks website, the Chico Enterprise Record (and other news papers as appropriate), and email notification to SRCAF. In addition, please see Section 1.6, "Public Review Process," of this DEIR regarding availability of the DEIR for review and the public/agency review period.
33 Who makes the final decision to approve or deny the project?	Please see Section 1.5, "Agency Roles and Responsibilities," of this DEIR. State Parks is the lead agency for the project. State Parks has the principal responsibility for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the EIR public-review process is complete, the Director of State Parks is the party responsible for certifying that the EIR adequately evaluates the impacts of the project. The Director also has the authority to either approve or reject the project.
34 The public requested to have hard copies of the Draft EIR available in addition to an online version and CDs.	Please see Section 1.6, "Public Review Process," of this DEIR for a list of locations where hard copies and online versions of the document are available for review.
35 Request to coordinate project plans with the Sacramento River Reclamation District to address flood control issues.	<p>The Notice of Preparation of the DEIR for the proposed project was sent to Butte County, the Sacramento River Reclamation District, and the Central Valley Flood Protection Board (CVFPB). In addition, the Notice of Availability of the DEIR for public review is also being sent to Butte County, the Sacramento River Reclamation District, and the CVFPB, providing the agencies the opportunity to comment on the DEIR. The proposed habitat restoration plans and outdoor recreation facilities are discussed in Chapter 3, "Description of the Proposed Project, illustrated in Exhibits 3-7 and 3-8, and discussed in greater detail in Appendices C and D. In addition, the Flood Neutral Hydraulic Analysis for the Nicolaus property and Singh Unit, which was prepared to inform the habitat restoration planning, is included in Appendix B and the results are discussed in Section 4.3 of this DEIR.</p> <p>State Parks will contact the Sacramento River Reclamation District and discuss the proposed project. However, State Parks will submit additional project information/ materials (e.g., permit applications), as necessary, to the CVFPB for the</p>

Scoping Comments and Responses

Scoping Comment

How it has Been Addressed in the EIR

following reasons.

CVFPB's duties are mandated by the legislature in Water Code Sec. 8520 et. seq. In particular, Water Code Sections 8533 and 8534, establish CVFPB's jurisdiction in regard to flood protection along the banks of the Sacramento River. As the state arm and trustee over floodways and the protection of the main river systems, the CVFPB has jurisdiction to receive and review and approve those plans which affect its territory.

A Memorandum of Agreement (MOA) dated November 3, 1999, between Butte County and the State Reclamation Board (now CVFPB) delegated regulatory authority for flood control in the proposed project area to Butte County. However, the MOA states that Butte County cannot delegate its regulatory responsibility to the Sacramento River Reclamation District without the approval of the CVFPB, which has not been granted (see MOA text, Section D and Section 15). Additionally, per Section 8 of the MOA, when Butte County learns of a proposed action that it may be without jurisdiction to regulate, the County will notify the CVFPB. In that event, CVFPB may exercise its jurisdiction under Water Code 8710 to require an application for an encroachment permit.

State Parks, as a state agency, is not subject to local or county policies or regulations. As described above, the MOA recognizes this situation (i.e. the County does not have jurisdiction over a state agency), and therefore, the County can request that the CVFPB assume jurisdiction.

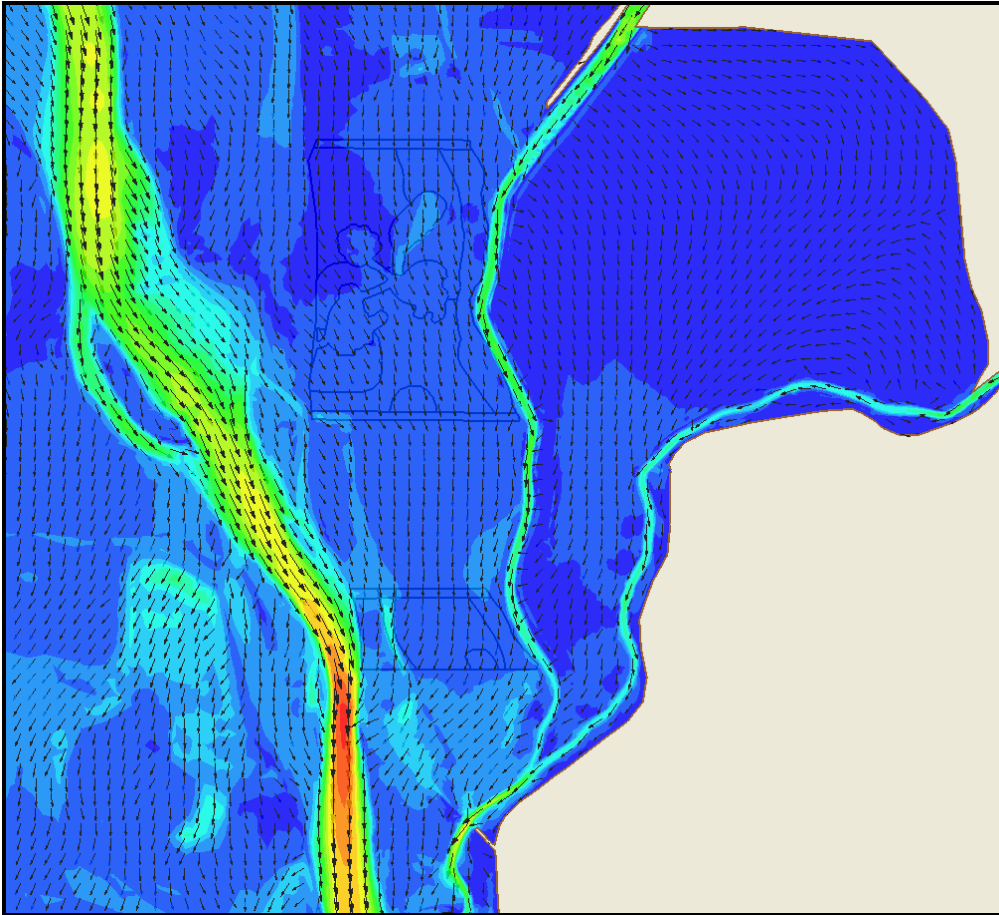
APPENDIX B

Hydrologic Analysis

**HYDRAULIC ANALYSIS FOR FLOOD NEUTRALITY ON THE
NICOLAUS AND SINGH PROPERTIES**

SACRAMENTO RIVER, MUD CREEK, AND BIG CHICO CREEK

May 30, 2008



Prepared For:



**HYDRAULIC ANALYSIS FOR FLOOD NEUTRALITY ON THE
NICOLAUS AND SINGH PROPERTIES**

SACRAMENTO RIVER, MUD CREEK, AND BIG CHICO CREEK

May 30, 2008

Prepared For:



**500 Main Street
Chico, California 95928**

Prepared By:

AYRES
ASSOCIATES

**2150 River Plaza Drive, Suite 330
Sacramento, CA 95833
(916) 563-7700**

Ayres Associates Project Number: 33-0577.00

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1.0 INTRODUCTION

1.1 General

This report summarizes the findings of a 2-dimensional hydraulic analysis on the Sacramento River from approximate river mile (RM) 191 to RM 196.5 and includes Big Chico Creek and Mud Creek, as shown in Figure 1. This report was prepared to assist The Nature Conservancy (TNC) in analyzing of the hydraulic effects of riparian restoration and the removal of small berms along Mud Creek within the Sacramento River floodplain.

To determine the hydraulic effects of these changes on the floodplain of the river, an existing 2-dimensional (2D) hydraulic model was modified and used. The previous two-dimensional model was developed for TNC to analyze levee setback options and restoration (Ayres Associates, 2002). Then new model included the tributary flows of Mud Creek and Big Chico Creek.

The riparian restoration areas and the berms are located on the left side of the Sacramento River floodplain at approximately RM 194 – 195 as shown in **Figure 2**. In Figure 2, the land use change areas are outlined, and the yellow lines show the locations of the berms. The project area consists of two areas, the northern area is known as the Nicolaus Planting Zone, and the southern area is the Singh Planting Zone.

1.2 Purpose and Scope

The purpose of this project was to use an existing two-dimensional hydraulic model to evaluate the hydraulic effects of habitat restoration and berm removal. This modeling was initially developed and calibrated for the J-levee project. The model was the extended and re-calibrated for the U.S. Army Corps of Engineers project (USACE). For more efficiency in running the model, the limits were reduced to RM 191 to 196.5, as shown in Figure 1. The project was accomplished as laid out in the scope items listed below.

- Develop and calibrate the 2-D hydraulic model to the 1995 Flood Event with the updated land use map (2006). Based on the previous 2-D hydraulic model developed by Ayres Associates in 2002, the updated model was modified with 2006 year land use.
- Develop an existing condition hydraulic model – This hydraulic model simulated the 1995 flood flow using post-January 1995 topography, river configuration and 2006 land use.
- Proposed alternative hydraulic model run – This hydraulic simulation analyzed the impacts of the potential land use changes and the removal of berms on two parcels in conservation ownership in the reach between RM 194 and RM 195.

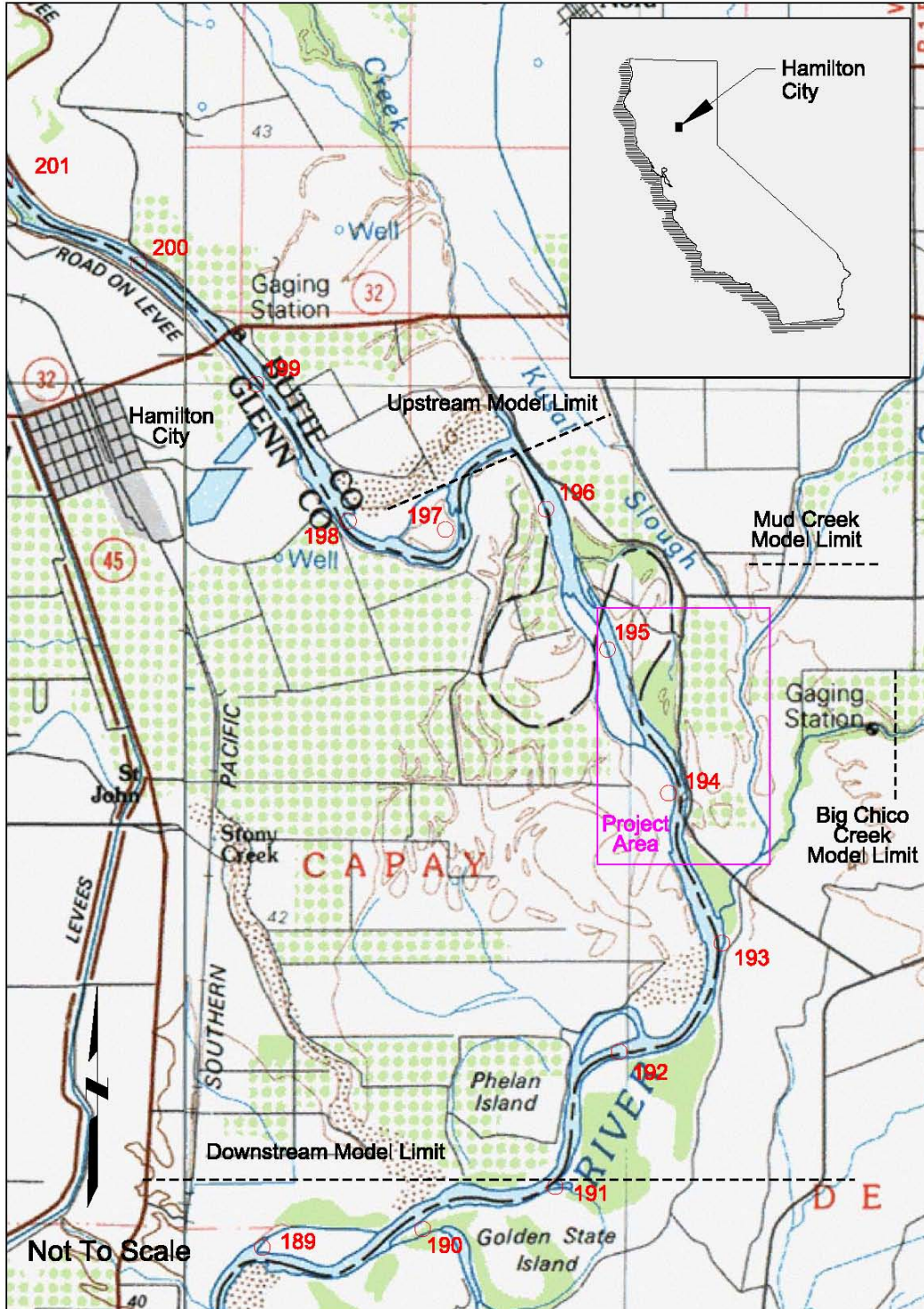


Figure 1. Location Map showing project area

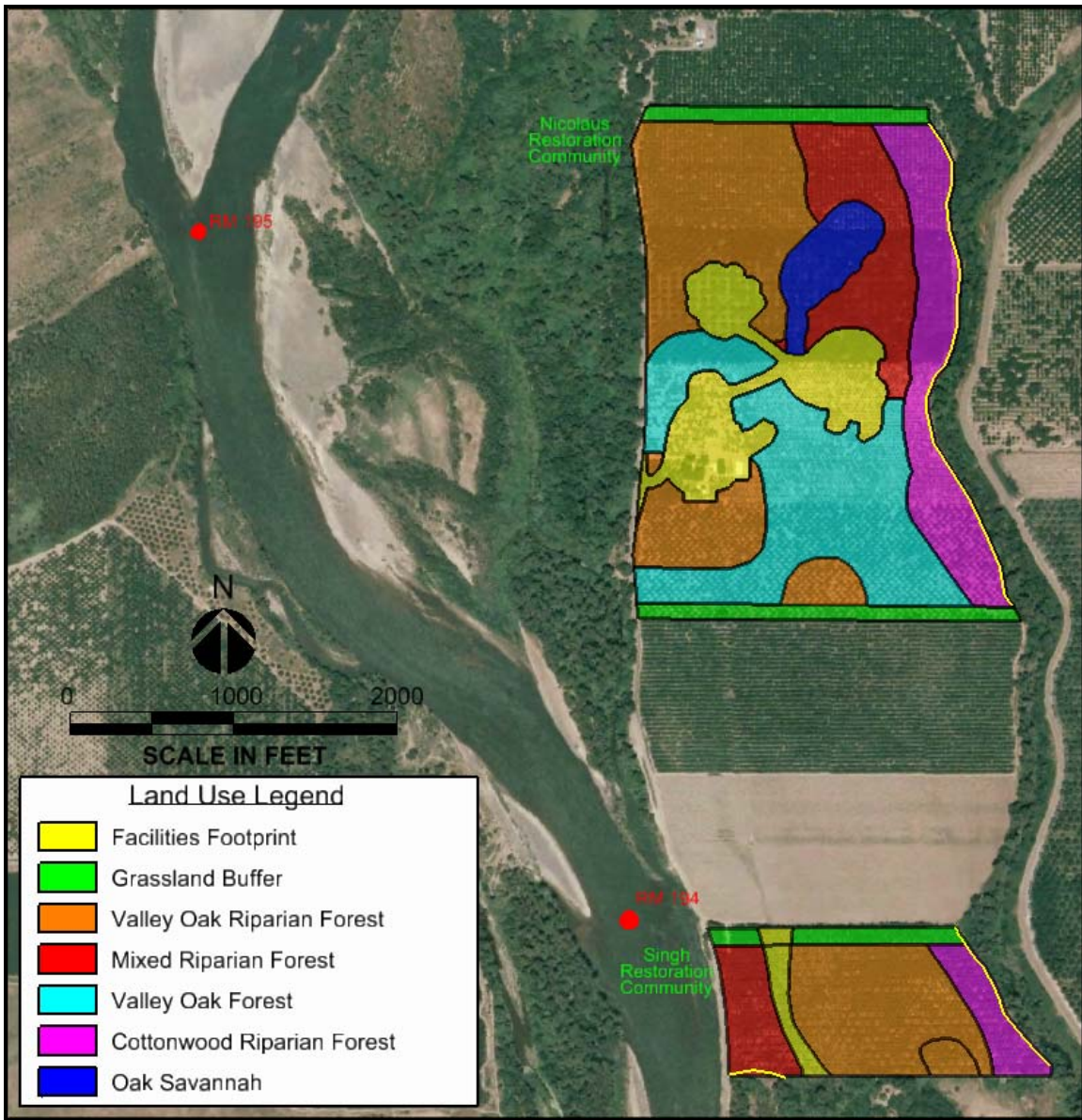


Figure 2. Project Area showing Proposed Habitat Restoration Communities

1.3 Acknowledgements

This analysis was authorized by The Nature Conservancy (TNC) through the Sacramento River Projects office in Chico, California. The point of contact for TNC is Mr. Ryan Luster in Chico, California. The hydraulic modeling was conducted by the Sacramento office of Ayres Associates under the direction of Mr. Thomas W. Smith, PE, GE.

2.0 TWO-DIMENSIONAL HYDRAULIC MODEL RUNS

2.1 Existing Condition

The existing condition hydraulic model represents the land use in 2006 (based on aerials developed by the U.S. Department of Agriculture) and the river configuration that existed following the 1995 flood events. The existing conditions land use in the project area is shown in **Figure 3**. The model uses the topographic mapping data developed for USACE following the 1997 flood event. This run will serve as a baseline for comparison to the with-project condition.

2.2 With-Project Condition

The with-project condition model incorporates proposed land use changes within two conservation ownership parcels (see **Figure 4**). In the Nicolaus Planting Zone, the land is currently covered by orchard, and will be converted to campground and forest, with a grassland buffer for the with-project condition. In the Singh Planting Zone, the proposed land use change is from orchard to mostly riparian forest, with a grass buffer at the north edge, and a meadow flow through. The rest of the model has the same land use for both the existing condition and the with-project condition.

The with-project condition model also removes the berms along the right bank of the Mud Creek, in the Sacramento River floodplain near RM 194, and the southern boundary of the Singh property. These berms are shown in Figure 2. The sizes and locations of berms were field verified by Ayres Associates in May 2007.



Figure 3. Existing Conditions Land Use

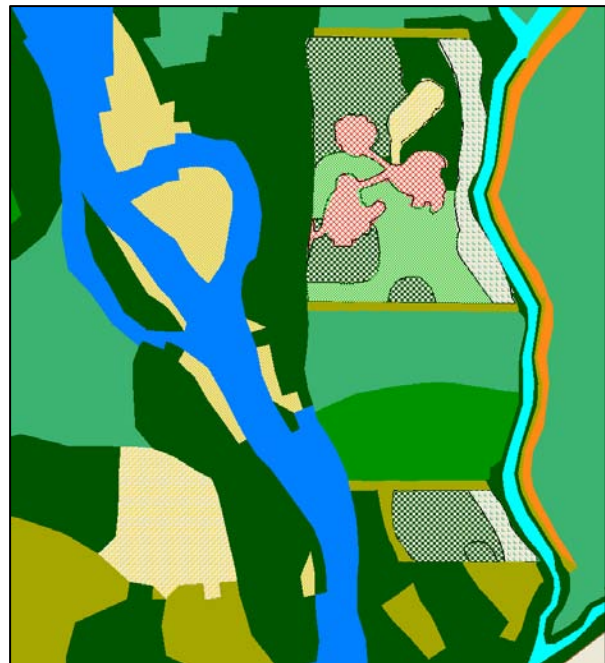


Figure 4. With-Project Land Use

3.0 HYDRAULIC MODELING

3.1 General

The 2-dimensional hydraulic modeling tool used for this project was the RMA-2V program, maintained and distributed by the USACE and modified by Ayres Associates. The program has been used extensively for similar projects on the Sacramento River and has proven to be an effective model for representing river flow conditions. The Surface-Water Modeling System (SMS) version 9.2 pre- and post-processor was used to develop the model geometry file and to view model results.

3.2 Model development

The geometric definition of the project reach is given in the form of a finite element network of triangular and quadrilateral elements, known as a mesh, as shown in **Figure 5**. The elements were sized and oriented to represent hydraulic features, breaklines, structures, and topographic changes. Each element contains corner and mid-side nodes, which represent points in space (X, Y, Z) and define the topography of the project reach. These nodes were laid out using topographic mapping and aerial photography as a reference for element size and orientation. Elevation values were assigned to the nodes using a digital terrain model of the river reach.



Figure 5. Plan view of the Finite Element Mesh

3.3 Material Roughness

Material types were assigned to each element based on land use and roughness characteristics. The land uses are represented in the model by Manning's roughness coefficients. The material types were assigned to each of the elements in the finite element mesh using 2006 aerial photograph. A field visit was also made to confirm land usage. For each material type, a Manning's roughness coefficient (n value) was assigned to represent a roughness type. These values were determined primarily from the previous modeling effort, and originally were derived using standard engineering protocols and references. Material types and corresponding Manning's n values used in the model are listed in **Table 1**. The land uses for the existing and with-project condition is shown in Figures 3 and 4. The material roughness of the campground is between Valley Oak Woodland and Scrub. Therefore, the Manning's n value of campground is determined as the average n of those two materials.

Table 1. Manning's Roughness Coefficients

Landscape Description	Manning's Roughness Coefficients
Levee/Road	0.025
Main Channel	0.035
Cultivated Field	0.035
Pasture/Grassland	0.035
Creek Bed	0.035
Pine Creek Bed	0.035
Sand/Gravel	0.04
Stony Creek Bed	0.04
Savannah	0.05
Scrub	0.10
Orchard	0.15
Forest/Riparian	0.16
Buildings/Structures	0.20
Valley Oak Woodland	0.12
Valley Oak Savanna	0.05
Valley Oak Riparian Forest	0.15
Cottonwood Riparian Forest	0.16
Campground	0.11

3.4 Boundary Conditions

The hydraulic model for this study extends from River Mile (RM) 196.5 at the upstream end to RM 191 at the downstream end, with the lower 3 miles on both Mud Creek and Big Chico Creek as shown in Figure 1. The RMA-2 program requires input parameters for the upstream and downstream ends of the model.

The upstream flow data used for this model was the peak flow data from the January 1995 flood event, published by USGS, of 170,000 cfs. For Mud and Big Chico Creek, flow data from the 1995 event was not available, so the channel design flows were simulated. The design flow on Mud Creek was 15,000 cfs and on Big Chico Creek, it was 7,000 cfs.

Downstream water surface elevation boundary conditions were referenced from previous 2-dimensional modeling conducted for the Butte Basin reach of the Sacramento River. The water surface elevation assigned to the downstream end of the model was 130.5 ft

3.5 Calibration

Two calibrations were performed by the previous studies, one for the initial J-levee project to a historic flood flow and again for the USACE project to a more recent flow event. The model used in this project is the latest version after calibration.

4.0 HYDRAULIC MODELING RESULTS

The velocity contours for the existing condition and the with-project condition are shown in **Figures 6** and **7**, respectively. The velocity differential plot is shown in **Figure 8**. The velocity differential equals the existing condition values subtracting from the with-project condition values. The velocity contours show that the velocity is between 0.0 ft/s and 3.5 ft/s in the project areas for both the existing condition and the with-project condition.

For the with-project condition, the land use change causes slight velocity increases. The largest velocity increase is 2.0 ft/s and is located in the meadow flow through passage in the Singh property. The existing velocity in that area is roughly 1.0 ft/s, and as long as the passageway remains vegetated, this increase should not have any harmful effects. There are increases adjacent to Mud Creek of up to 0.5 ft/s (from 0.5 ft/s to 1.0 ft/s). The grass buffers cause an increase on the west side of the properties, with the greatest increase being 1.2 ft/s (from 1.0 ft/s to 2.2 ft/s) at the southern end of the Nicolaus Community. The removal of the berm from the Singh property causes an increase in that area of up to 0.7 ft/s (from 0.7 ft/s to 1.4 ft/s) and also slightly reduces the velocity on the east bank of the Sacramento River adjacent to the site. Velocity vector plots for existing and with project condition are shown in **Figures 9** and **10**. These do not show any significant change in the flow path of the river and floodplain.

The water depth plots for the existing condition and the with-project condition are shown in **Figure 11** and **12**, respectively. The water surface differential plot is shown in **Figure 13**. The water surface elevation differential shows no increases within either the Nicolaus or the Singh Planting Zone. A decrease of 0.10 ft occurs at the top of the Oak Savannah planting within the Nicolaus Community.

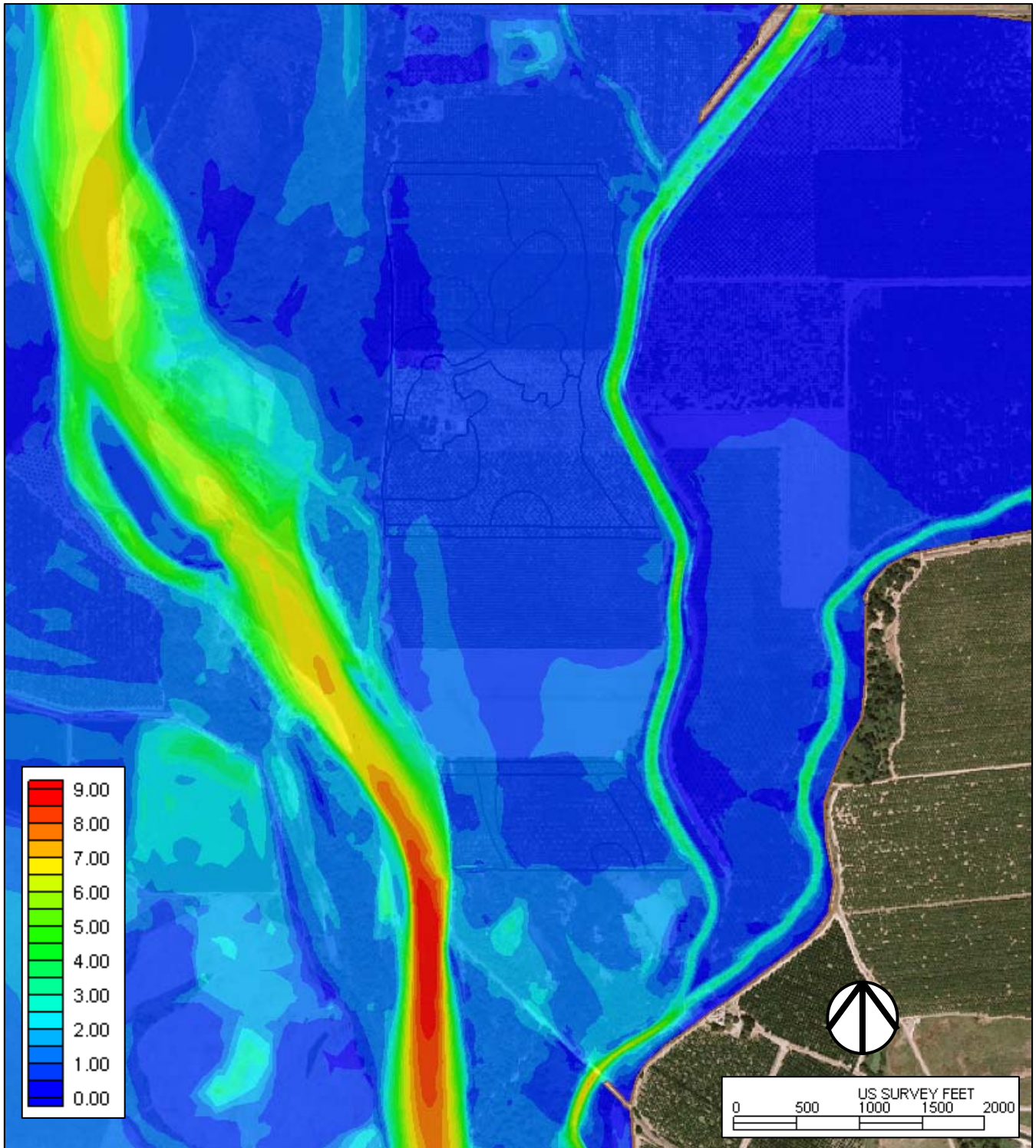


Figure 6. Existing Conditions Velocity

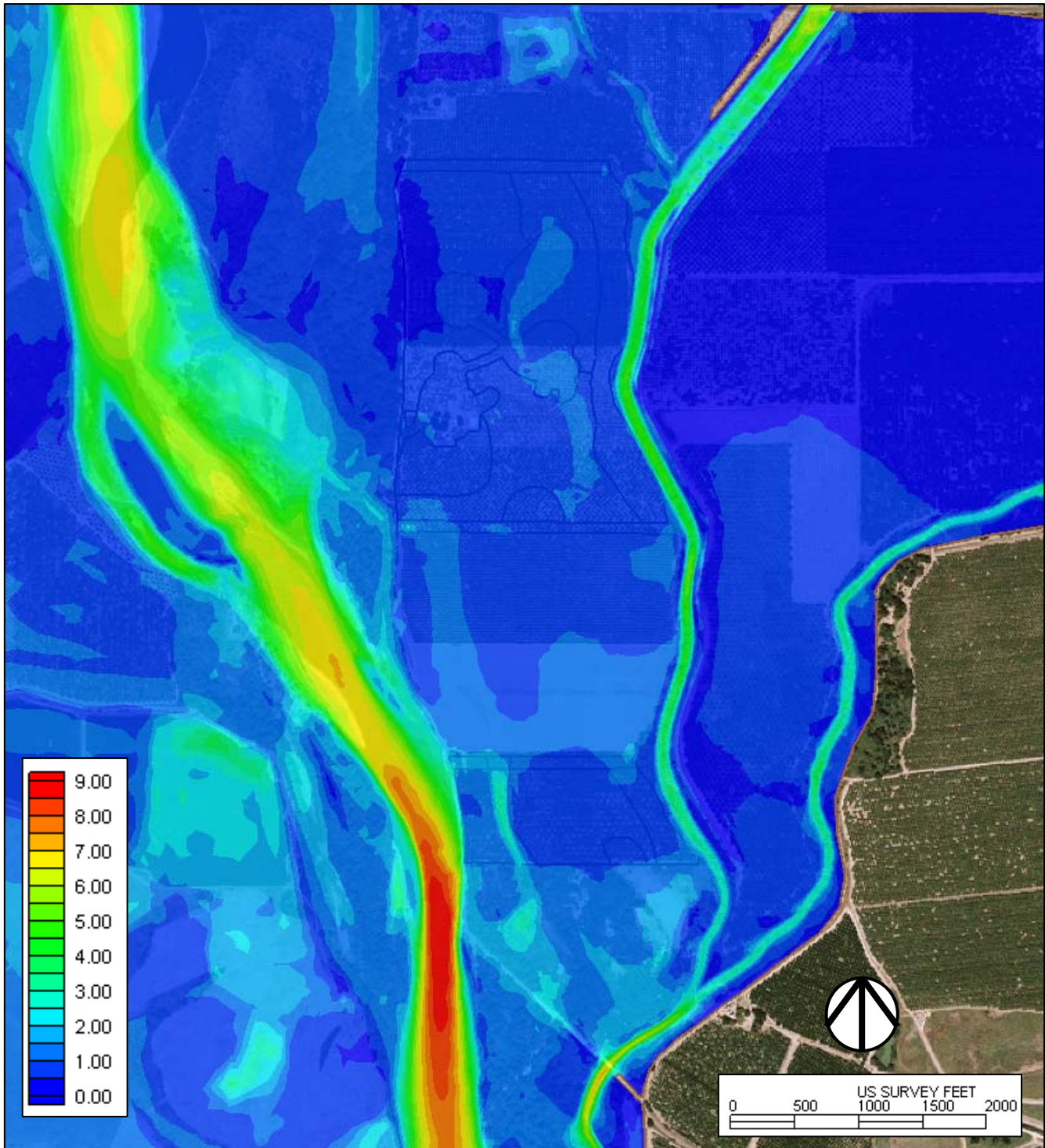


Figure 7. Restoration Conditions Velocity

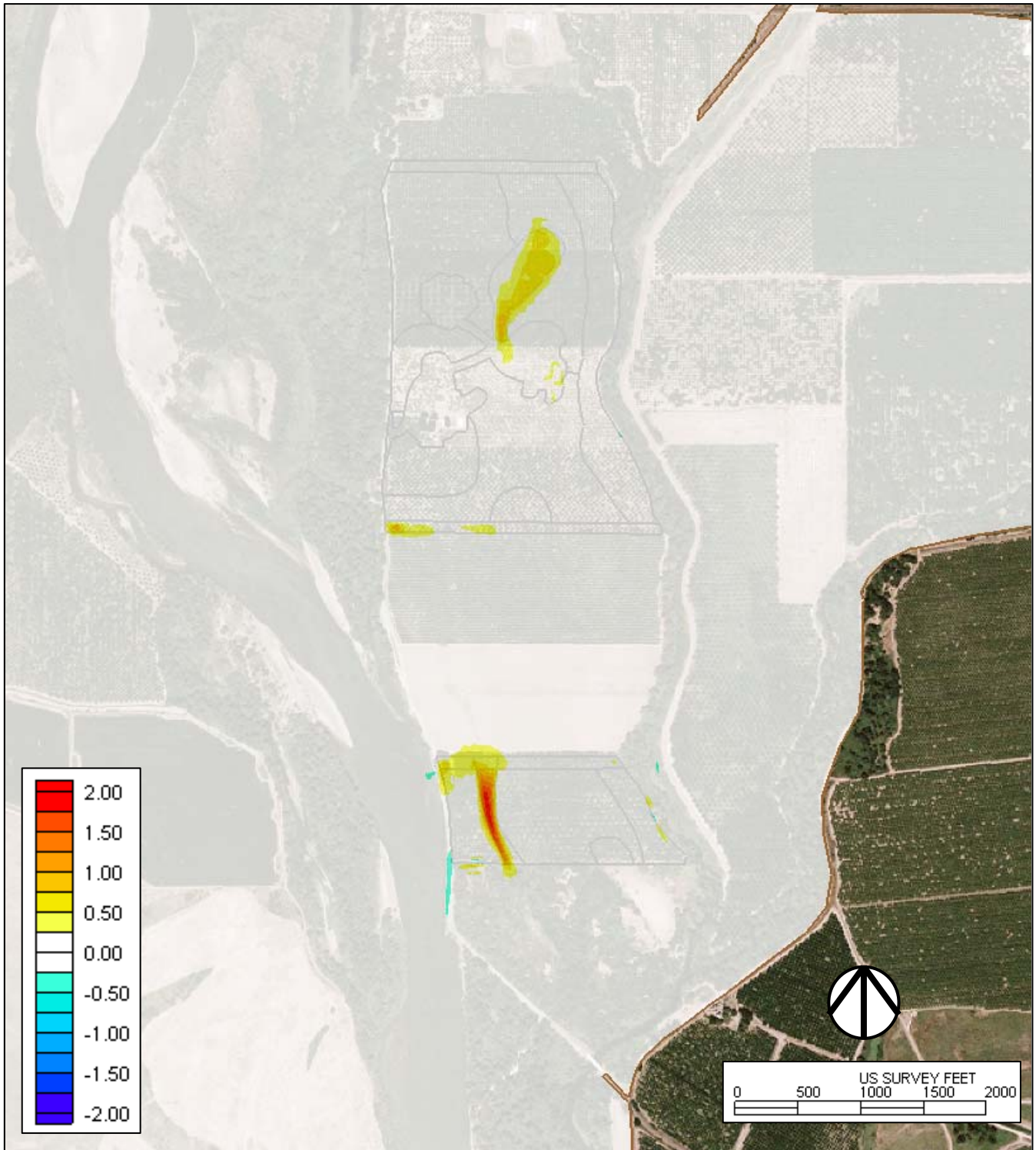


Figure 8. Velocity Differential – Restoration to Existing



Figure 9. Existing Conditions Velocity Vectors



Figure 10. Restoration Conditions Velocity Vectors

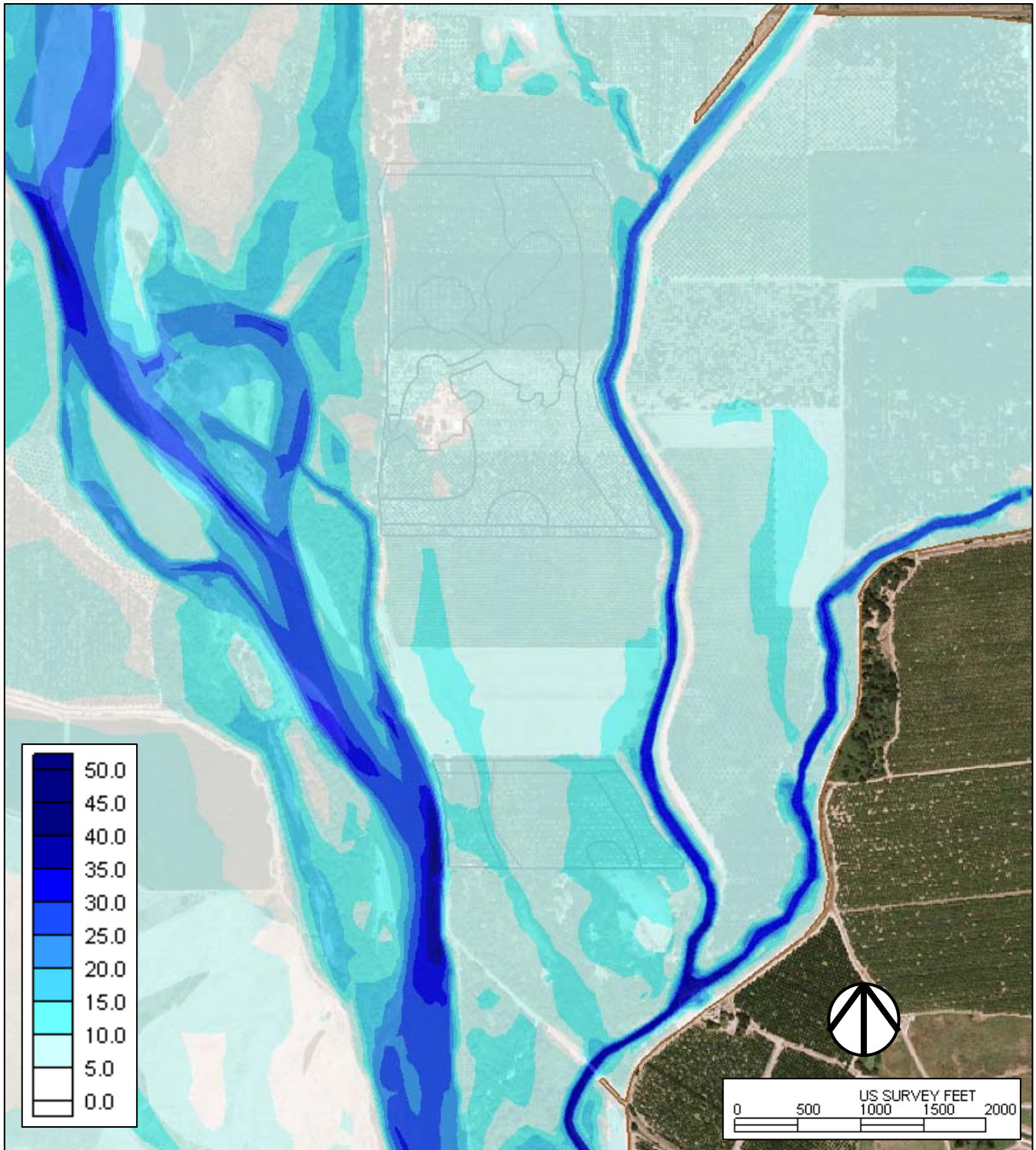


Figure 11. Existing Conditions Water Depth

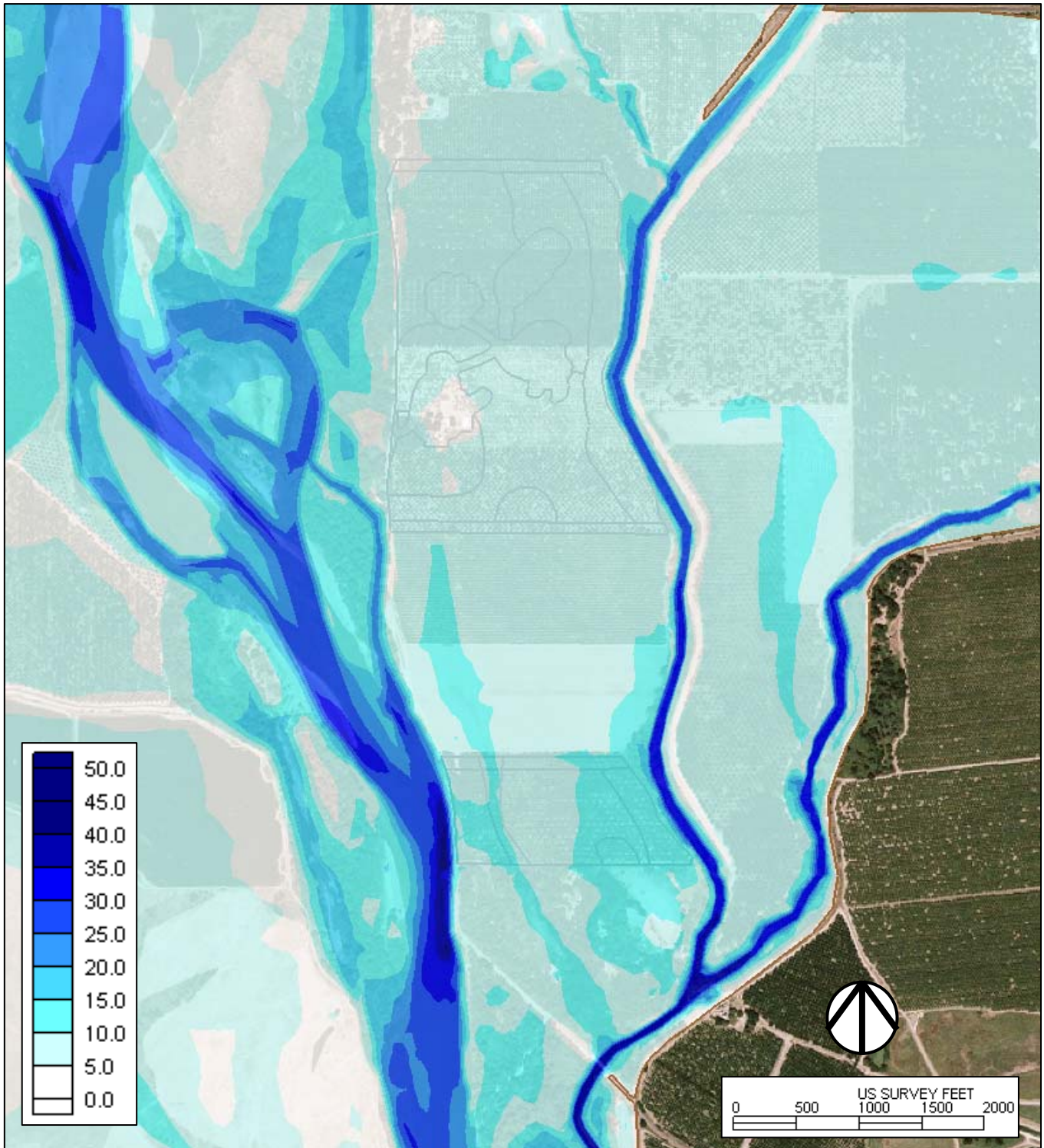


Figure 12. Restoration Conditions Water Depth

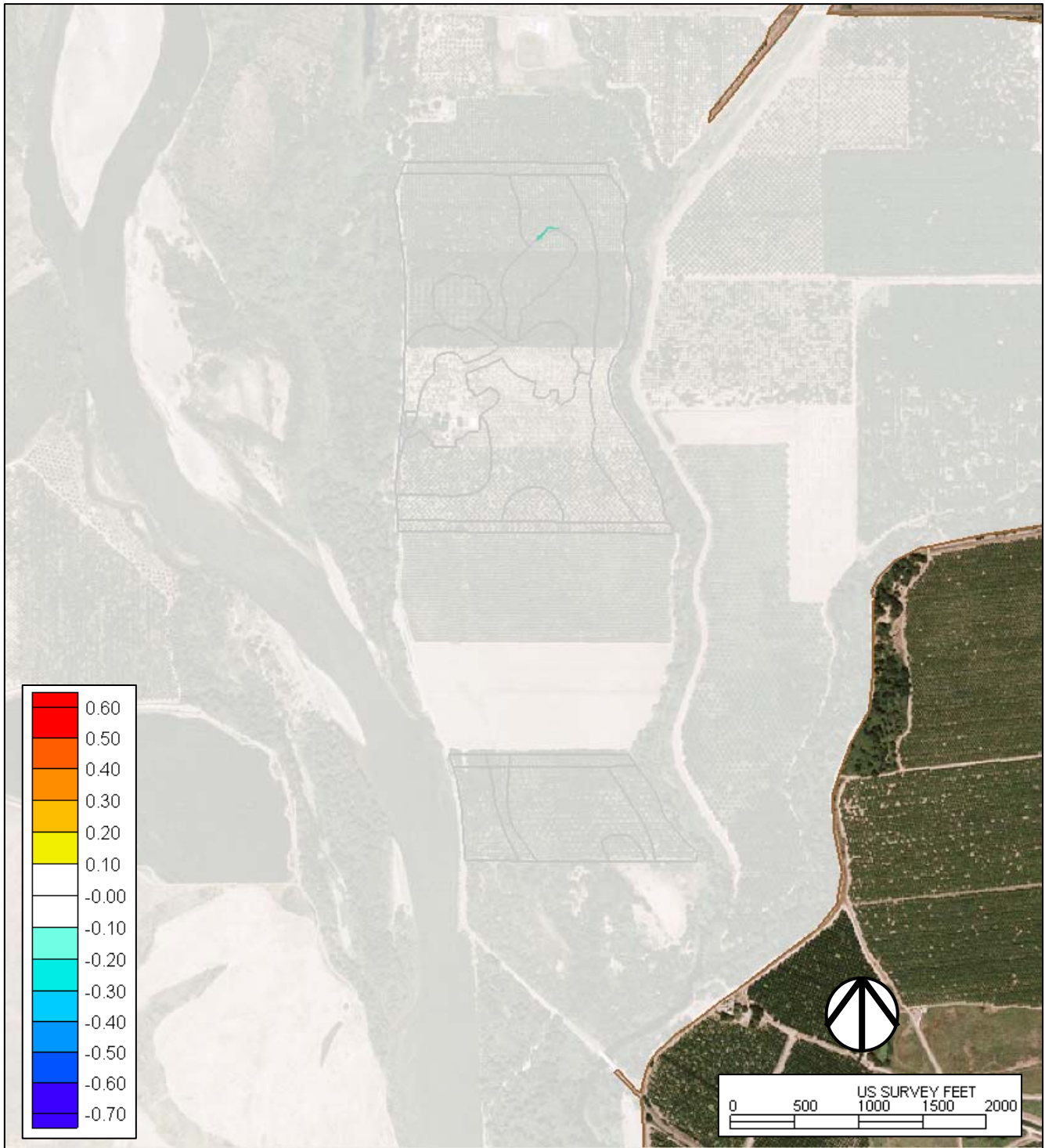


Figure 13. Water Surface Elevation Differential – Restoration to Existing

5.0 CONCLUSIONS

Based on the analysis performed and results presented in this report, we offer the following conclusions.

- The meadow flow-through in the Singh property causes a 2.0 ft/s increase, however given the low existing conditions velocities (1.0 ft/s) and planned vegetation, a resultant velocity of 3.0 ft/s will not create any harmful effects at this location.
- The with-project condition model shows a slight increase in velocities in the oak savannah area, campground area, grass buffers, and the locations of berm removals. These are considered less than significant and should cause no erosion problems.
- The hydraulic model shows very little change in water surface elevation. There are no increases in water surface as a result of this restoration. There is a small section of decrease of about 0.1ft in the Nicolaus Planting Zone.

6.0 REFERENCES

Ayres Associates, Two-Dimensional Hydraulic Modeling of The Upper Sacramento River, RM 194.0 To RM 202.0 Including Riparian Restoration, Two Setback Levee Alternatives, And East Levee Removal. Glenn and Butte Counties, California, 2002.

U.S. Department of Agriculture, 2006, Sacramento River Aerial Imagery

APPENDIX C

Restoration and Management Plans

Riparian Habitat Restoration Plan –
Singh Unit, Sacramento River (RM 194)

Riparian Habitat Restoration Design and Management Plan

Singh Unit

Sacramento River (RM 194) Bidwell Sacramento River State Park



Prepared by:
**Northern Central Valley Office
500 Main St.
Chico, CA 95928**

April 2008

Prepared for:
**California Department of Parks and Recreation
Bidwell-Sacramento River State Park**

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Appendices

Appendix 1: Singh Public Recreation Conceptual Plan

Appendix 2: Singh Cultivated Restoration Plant Composition

Maps

Map 1: Singh Property Location Map

Map 2: Singh Estimated Flood Recurrence Interval Map

Map 3: Singh restoration community layout

RESTORATION PLAN SUMMARY

LOCATION	Property Name	Singh
	Street address	River Road
	City	Chico
	County	Butte
	APNs	39-580-025
	River mile	194
RESTORATION SUMMARY		
RESTORATION SUMMARY	Restoration site area	36 acres
	Plant communities	Valley Oak Riparian Forest (VORF): 18.9 acres Mixed Riparian Forest (MRF): 6.1 acres Cottonwood Riparian Forest (CWRF): 5.0 acres Flow Thru Meadow (FTM): 2.6 acres Grass Buffer (GB): 3.3 acres
	Planting density (spacing) and overstory species/acre	VORF (11' x 30'): 132 MRF (11' x 30'): 132 CWRF (11' x 30'): 132 GB: 15 pounds native seed/acre

EXECUTIVE SUMMARY

The Nature Conservancy (TNC) has agreed to design a riparian habitat restoration plan for the Singh Unit of the Bidwell-Sacramento River State Park located on River Road, Butte County, California. Restoration at Singh can not proceed until an environmental assessment is completed, currently underway and funded by a grant to TNC from DFG (Grant #ERP-02-P16D).

The Riparian Restoration Plan for Singh details the restoration plan agreed upon by members of TNC's Sacramento River Project team and approved by the California Department of Parks and Recreation Northern Buttes District. The restoration plan is based on implementation techniques practiced and refined by TNC on prior restoration projects along the Sacramento River. This restoration plan describes a specific restoration design based on the environmental conditions and ecological goals at the Singh Unit, and the procedures for implementation of site preparation, planting/seeding, maintenance, and monitoring.

INTRODUCTION

A. Location

The Singh Unit is located along the eastern bank of the Sacramento River at river mile 194 (Map 1) and is within the northern part of the Chico Landing Sub-reach (RM 206-178). The Unit is in Butte County south of the Sacramento Avenue and River Road junction.

B. Site History

The Singh property was part of an original Mexican Land Grant purchased by John Bidwell between 1849 and 1851, the land grant area was subsequently subdivided and sold as smaller parcels in later years.

The oldest aerial photograph of the area is from 1924 which shows that the property was already cleared of most of its riparian vegetation at the time. However, in 1924, there was still a wide band of thick riparian forest on about 1/3 of the eastern portion of the property adjacent to Mud Creek, thick forest in the swale that runs through the middle of the property, and open woodland (most likely valley oak riparian forest) between the swale and Mud Creek.

C. Significance of Restoration

The Sacramento River is a fundamental state water source that drains 24,000 square miles of the northern Central Valley and supplies 80% of freshwater flowing into the Bay-Delta (CA State Lands Commission 1993). Historically, the river was lined by approximately 800,000 acres of riparian forest (Katibah 1984). Over 95% of this habitat has been lost, however, to selective logging, agriculture, urban development, and flood control and power generation projects. Cumulatively, these changes have greatly stressed the Sacramento River and associated species. The loss and degradation of riparian habitat has greatly diminished the river's ability to support viable wildlife populations and encouraged the invasion and proliferation of non-native invasive species. Two-thirds of the linear extent of the river's banks have been modified and confined by levees and riprap. Channelization, bank protection, and the construction of the Shasta Dam degraded riparian habitat along the Sacramento River by restricting the dynamic forces that promote natural habitat succession and regeneration.

Healthy riparian habitats contain a great number of flora and fauna due to the range of community types, overall structural diversity, availability of water and soil moisture, potential as corridors for migration, and critical breeding grounds (California State Lands Commission 1993, California Resources Agency 2000). Additionally, riparian corridors provide two primary functions essential to maintaining water quality: 1) moderating stream temperature and 2) reducing sediments and nutrients emanating from upland agriculture (Castelle *et al.* 1994). The loss of high-quality habitat and the decrease in water quality along the Sacramento River has caused many native species populations to become critically endangered. Important at-risk species include the Sacramento splittail, green sturgeon, chinook salmon, steelhead trout, western yellow-billed cuckoo, Swainson's hawk, least Bell's vireo, and Valley elderberry longhorn beetle (VELB) (CALFED Multi-Species Conservation Strategy 2000).

Although severely degraded, the Sacramento River is still the most diverse and extensive river ecosystem in California (California State Lands Commission 1993). In an effort to improve ecosystem health in the region, federal, state, and local governments, as well as non-government

organizations, have begun to implement a series of ecosystem restoration programs along the river. In 1986, the California State Legislature passed Senate Bill 1086, which mandated the development of a management plan for the Sacramento River and its tributaries to protect, restore, and enhance fisheries and riparian habitat (California Resources Agency 2000). The Sacramento River Conservation Area Forum (SRCAF) non-profit organization formed and set as its primary goal the preservation of remaining riparian habitat and reestablishment of a continuous riparian corridor along the Sacramento River from Red Bluff to Colusa.

D. Agreements

Under a grant agreement between DFG and TNC (agreement # ERP-02D-P16D), TNC is to develop a restoration plan for the Property and conduct a CEQA analysis on the proposed restoration. This document helps fulfill those obligations.

E. Objectives

1. Short-term objective

After funding is secured and the CEQA process is successfully completed, the short-term goal for the Project is to plant a diverse mosaic of riparian communities on 32 acres in spring Project Year 2. Exotic weeds that inhibit seedling establishment of native riparian vegetation and a diminished flood disturbance regime limit natural establishment of floodplain riparian communities, therefore it is necessary to conduct active horticultural restoration such as planned for the restoration at the Property (Peterson 2002). Restoration on this site facilitates the establishment of native riparian habitat that without active cultivated restoration would return to native vegetation at a very slow rate or not return at all.

2. Long-term ecological objectives

The long-term goal of the Project is to improve the ecological health and long-term viability of at-risk species and riparian communities along the Sacramento River by restoring riparian habitat and improving water quality through active horticultural restoration.

Based on the ecological conditions found in naturally occurring riparian forests along the Sacramento River from Red Bluff to Colusa, TNC's ecological objectives for this site are:

a. To establish early-successional stage and late-successional-stage riparian communities which have been severely reduced in extent along the Sacramento River since 1850.

The Project will add riparian habitat to an ecologically important tributary area, tributary areas are vital to the health and survival of riparian obligate species. Restoring complex riparian habitat in the area will improve habitat for fish and wildlife. Fish benefit from complex riparian areas that become flooded at high flows, slow floodwaters down and provide refugia for young and juvenile fish. Additionally, large woody debris, a result of increased riparian habitat, provides food and cover for critical life stages of anadromous fish (Bryant 1983).

b. To provide habitat for neo-tropical migrant land birds.

Both aquatic and terrestrial at-risk riparian species, as well as common riparian species, will benefit from protection and restoration of large expanses of habitat along the mainstem and at the confluences of tributaries to the Sacramento River.

c. Improve water quality by decreasing sediment and pesticide runoff into the Sacramento River.

Replacing flood-prone agriculture with restored riparian habitat will decrease pesticide and herbicide applications on land adjacent to the river, thereby increasing water and sediment quality. Additionally, restored riparian forests will buffer and filter toxic and organic matter that originate further away from the river, thereby further enhancing water and sediment quality

3. Management Objectives

The management objectives, which are implementation standards for achieving the ecological objectives, are outlined as follows:

- a. Meet, or exceed, a survival of at least 80% planted woody plants three years after planting (December of Project Year 4).
- b. Meet, or exceed, herbaceous density of 80% or greater by December of Project Year 4.
- c. Ensure that the restoration site has a woody plant species diversity comparable to nearby remnant mixed riparian forest.

4. Public Recreation and Access

DPR and TNC have developed a conceptual public use and access plan as part of the overall planning grant to TNC. See Appendix 1 for the conceptual public access plan for the Property. State Parks will create public hiking trails on the Singh Unit that will be incorporated into the habitat restoration, these trails will be linked with existing trails on the Pederson Addition directly south of Singh.

F. Permits and Environmental Documentation

1. CEQA

Working with DPR, TNC will complete the necessary CEQA documents for this restoration project. DPR is the lead agency for the CEQA analysis while EDAW, Inc, Sacramento, is the consulting firm hired by TNC to conduct the CEQA analysis.

2. Floodplain Encroachment Permit

As part of the project, TNC will work with DPR to secure a floodplain encroachment permit from the California Department of Water Resources if necessary.

3. Pesticide Use Permits

When restoration of the Property is initiated, the restoration contractor will need to follow all Butte County and State of California pesticide use laws when applying herbicides for weed control in the restoration area.

II. SCHEDULE OF ACTIVITIES

The timing of the annual activities is outlined below.

	Responsible Party	Project Year 1				Project Year 2				Project Year 3				Project Year 4			
		W	SP	SU	F	W	SP	SU	F	W	SP	SU	F	W	SP	SU	F
PLANNING																	
*CEQA	TNC																
**Restoration Plan	TNC, DPR																
PROPOGATION																	
***Seed collection	RC																
Nursery	RC																
Cutting collection	RC																
FIELDWORK																	
Orchard removal	RC																
Field preparation	RC																
Layout	RC																
Overstory planting	RC																
Understory planting	RC																
Understory seeding	RC																
MAINTENANCE																	
Weed control	RC																
Irrigation	RC																
MONITORING																	
Post-planting	RC																
Regular check-in	RC																
End of Season	RC																
REPORTING																	
Annual	RC																
Completion****	RC																

*completed in 2008

** completed in 2007

*** to be completed prior to Year 1

**** to be completed in January Project Year 5

R.C. = restoration contractor

III. PLANNING

A. Site Assessment

Information collected for the preparation of the restoration plan includes seven parameters: vegetation on and nearby the site, native fish and wildlife usage, soil profile, regional hydrology, depth to water table, historic geomorphic condition, and topography. Hydraulic modeling results from the Flood Neutral Hydraulic Analysis for the Singh and Singh Properties, River Miles 195-194 (Ayres Associates, 2007) are used to verify that the planned restoration will result in no net increase in flood water surface levels on the restoration site.

The information from the site assessment is used to determine the flooding regime, drainage, riparian restoration communities, and plant species appropriate for planting the site. The structure, or appearance of a riparian forest is dictated by these factors. Some influences can be seen

immediately on a restoration site and others may not be seen for many years or even decades. For example, gravel inclusions in the soil profile cause immediate mortality of planted trees due to lack of water, whereas the effects of hydrology on reproduction of specific species in a planting is not apparent for many years.

A site assessment for the Property was conducted by Dittes and Guardino Consulting (2006). The assessment is no file at the TNC office in Chico, CA and the Department of Parks and Recreation also has a copy. The information collected in the Property site assessment is summarized below.

1. Soil Profile

A soil survey was conducted summer 2006 with 8 soil cores taken across the property. There are two primary soil types on the property, Gianella Fine Sandy Loam and Parrott Silt Loam (USDA-NRCS classification, in prep). In summer 2006 the water table was located between 5 feet 5 inches in the northwest corner to 14 feet 1 inch in the central portion of the Property, average water table depth is 9 feet 4 inches. The shallowest water table depths were located adjacent to Mud Creek indicating ground water from Mud Creek is influencing the water table on the eastern portion of the property. There were no gravel refusal layers found in the soil survey.

2. Vegetation

Unit specific qualitative descriptions of dominant tree, shrub, and native understory species in adjacent riparian areas give valuable insight as to what species are appropriate for restoring a site. A vegetation assessment was conducted in summer 2006 on remnant habitats located along Mud Creek as well as on the Indian Fishery-Chico Landing Unit and Big Chico Creek Riparian Area of the Bidwell Sacramento River State Park. These remnant riparian habitats serve as models for the species composition and relative species frequencies for the cottonwood riparian and mixed riparian forest restoration communities to be established on the Property. The valley oak riparian forest community to be established on the Property are no longer represented locally as this community has been cleared for agriculture use; TNC relies on habitat composition descriptions from Holland (1986) and Vaghti (2003) to reconstruct these rare communities.

3. Hydrology and Geomorphology

The site is located on a stable upland landform adjacent to the Sacramento River. The majority of the property is within the 2 to 2.5 year flood recurrence interval period with the very eastern portion in the 1 year return interval period (Map 2). The property floods regularly in the winter which dictates a spring planting schedule. Once the riparian plant communities are established it is anticipated that the current erosion problems on the property will diminish significantly. It has been demonstrated that floodplains of the Sacramento River are less prone to erosion and more stable when riparian habitat is present as opposed to agricultural land cover (Micheli et al., 2004).

4. Native Fish and Wildlife Usage

Special status species that are expected to benefit from the Nicoalus restoration include the American Bald eagle (state threatened), Valley Elderberry Longhorn Beetle (federally-threatened), steelhead (Central Valley evolutionarily significant unit), Chinook salmon –

spring run (federally threatened), state threatened), Chinook salmon – winter run (federally threatened, state threatened), Swainson’s hawk (state threatened), Least Bell’s vireo (federally endangered, state endangered), and western yellow-billed cuckoo (federal candidate, state endangered).

Other special status species know to occur on or near the Property that may benefit from the restoration include: Sacramento valley tiger beetle, green sturgeon, hardhead, western pond turtle, American white pelican, bank swallow, California Horned lark, great blue heron, great egret, Least Bittern, little willow flycatcher, logger head shrike, mountain plover, tricolored blackbird, yellow-breasted chat, double-crested cormorant, osprey, northern harrier, sharp-shinned hawk, Cooper’s hawk, peregrine falcon, prairie falcon, northern harrier, ferruginous hawk, short-eared owl, long-eared owl, white-tailed kite, yuma myotis, pallid bat, Townsend’s big-eared bat, western red bat, and western small-footed myotis.

B. Cultivated Restoration Design

Communities planned for habitat restoration are based on site assessments (including soil profile, topography, flood frequency, depth to groundwater at base flows, weed community, and the existing adjacent riparian community) and historic aerial photography. Species composition is determined by the ecological objectives, existing native species at and around the Property, and available understory seed.

Point Reyes Bird Observatory (PRBO) monitors bird usage on habitats of the Sacramento River. PRBO has provided TNC with recommendations for restoring appropriate breeding and foraging habitat for riparian obligate songbirds. PRBO has recommended establishing communities with a divers canopy structure both horizontally and vertically across any given restoration site. This will be accomplished at the Property by restoring a mosaic of habitat types across the Property. In addition, the restoration plantings will include areas where trees are clumped and interspersed with more open areas dominated by lower stature shrubs and forbs. This allows for usage of the site by a divers array of wildlife species that require different habitat structure and composition types.

1. Restoration Communities

The Property will be planted with the following plant communities (Holland 1986): valley oak riparian forest (18.9 acres), mixed riparian forest (6.1 acres), cottonwood riparian forest (5 acres), flow through meadow (2.6 acres), and grassland buffer (3.3 acres). See Map 3 for a detailed restoration community layout plan. The species composition for these communities is listed in Appendix 2.

2. Planting Design

The arrangement of plants across the site in any given 10 row by 10 plant area will be arranged to maximize structural and compositional diversity both vertically and horizontally across the field. At each location, spaced 11 feet along the planting strips, one or two plants will be planted according to the community-specific planting composition. The planting strips will be aligned with the contour of the river on the west side and Mud Creek on the east side of the Property. Planting strips in the valley oak riparian forest, mixed riparian forest, and cottonwood riparian forest will be spaced 20 feet apart. Where appropriate, an understory plant (shrub, forb, grass, or vine) will be planted either next to an overstory plant

or clustered with other understory plants. This planting scheme allows for the vertical and horizontal structural diversity described in Section III. B. above. Refer to Appendix 2 for the planting composition of each community.

3. Plant Propagation

Appendix 2 lists plant propagation method (container, cutting, plug, drilling) used for each species. Container plants are raised from seeds or cuttings collected from the Sacramento River floodplain and have been propagated by CSU Chico, Floral Native Nursery, and Hedgerow Farms for planting as seedlings at the Property. Willow and cottonwood cuttings refer to branches about 1" in diameter cut from mature cottonwood and willow trees and planted directly into the field. Cuttings are taken no more than 5 days prior to planting and soaked for 24 hours before planted. Phase 1 overstory and understory plants will be hand planted in spring of Project Year 2 (see Appendix 2) the Phase 2 understory grass seed will be directly seeded with a rangeland drill in December of Project Year 2.

The restoration contractor is responsible for the plant propagation for all of the riparian plants. Planting crews are hired and supervised by the restoration contractor.

IV. RESTORATION IMPLEMENTATION

A. Field Preparations

43 acres of walnuts are to be removed from the property in Project Year 1 and 2 prior to the restoration implementation in Project Year 2.

The restoration contractor is responsible for field preparation prior to planting including clearing debris, disking, weed control (as necessary), and laying out the planting rows. Site layout is the preliminary stage of planting and occurs after field preparations have been completed. Site layout organizes the field according to the details outlined in the plant design (e.g. utilizing different colored flags to mark the planting space for an intended plant species) and is intended to facilitate planting efforts.

B. Irrigation Design and Installation

The restoration contractor will be responsible for modifying the existing irrigation system. A microdrip, hard-hose irrigation system should be installed in spring of Project Year 2.

Important note: The irrigation system must be fully functional prior to planting because immediate irrigation may be needed to reduce transplant shock.

C. Planting

1. Phase 1

The first phase of the planting will be implemented as soon as the threat of flooding is over, the restoration contractor will plant all nursery grown potted stock plants as well as all cottonwood and willow cuttings. Phase 1 planting for the site is scheduled for spring of Project Year 2 (see Appendix 2). Plants will be spaced 11 feet apart in the strips adjacent to

the emitters in the hard hose irrigation system. Planting rows are spaced at 20 feet apart in the valley oak riparian forest (VORF), mixed riparian forest (MRF), and cottonwood riparian forest (CWRF). These spacings have been calculated to ensure a planting density of 198 overstory plants/acre in the VORF, MRF, and CWRF.

2. Phase 2

This is the understory component of the restoration program; the understory of the MRF, CWRF, and VORF as well as the grass buffer and flow thru area will be direct seeded in December of Project Year 2.

Protective milk cartons are to be placed around nursery grown plants and cuttings. The cartons protect the plants from herbicide drift during weed control. Two small bamboo stakes are used to anchor the cartons.

The restoration contractor will use a rangeland drill to direct seed the understory in December of Project Year 3. Understory species used will be local ecotypes, preferably collected within 20 miles of the restoration site. Hedgerow Farms, Winters, CA, produces the appropriate ecotypes for seeding the Property. These ecotypes have been hand picked by TNC staff and supplied to Hedgerow Farms for native grass restoration along the Sacramento River.

V. MAINTENANCE

Maintenance (irrigation and weed control) is scheduled to follow directly after the Phase 1 planting and continue for 3 years. The Phase 2 understory direct seeding planting will be maintained during Project Years 3 and 4.

A. Restoration maintenance (spring Project Year 2 – December Project Year 4)

1. Irrigation

a. Method

Irrigation is the single most important factor in the success of riparian restoration projects in California. Adequate soil moisture allows plants to grow vigorously and compete effectively with weeds. If at anytime it is determined that either irrigation scheduling or the irrigation system is inadequate and plants are not growing actively, TNC will remedy this problem immediately.

b. Standards

Standards are based on plant growth and survival assessed during weekly assessments by the restoration contractor. Adequate soil moisture and weed control must be maintained to ensure vigorous native plant growth. A watering regime will be determined each week according to weather, growing, and site conditions.

2. Weed Control

a. Methods

This site has annual rye grass, Johnson grass, morning glory, chick weed, and other problematic weeds that will inhibit native plant growth if unchecked. Control efforts will concentrate on controlling these noxious weeds through herbicide

application, mowing, and discing when and where appropriate. The restoration contractor will use adaptive management to determining best management practices for weed control. Aggressive control by mowing, disking, and herbicide application will control these weeds as a serious problem in the restoration site.

Pesticide Use: The State of California and each county regulate the use of all pesticides, only state and locally approved herbicides will be used on the restoration site. Herbicide applications will be prescribed by a state-licensed PCA (pest control advisor) and applied by state-licensed applicators. Herbicide use will be reported to the county agriculture commission as required by state and county law. Weed control will be conducted year round on an as needed basis.

b. Standards

The height and vigor of weeds on restoration sites has a direct effect on the growth and survival of the cultivated riparian plants. TNC's objective is to optimize growth of the riparian species past a point where they can compete effectively with these exotic plants, envisioned for December Project Year 5. The larger the riparian species the less they are affected by weeds.

Standards for weed control for this project are as follows:

Project Year 2 growing season: No weed growth within the alleyways. Weed growth in the planting strips is kept to less than 6". Weed stem density within the strips should be less than 3/ft². Alleyways to be direct seeded are kept completely clean, no weed growth. Manually remove all weeds growing inside each milk carton.

Project Year 3 growing season: No weed growth within the alleyways. Direct seeded native grass will dominate the alleyways and compete with the non-native weeds. Weed growth in the planting strips is kept to less than 6". Weed stem density within the strips should be less than 3/ft².

Project Year 4 growing season: No weed growth within the alleyways. Direct seeded native grass will dominate the alleyways and compete with non-native weeds. Weed growth in the planting strips is kept to less than 6". Weed stem density within the strips should be less than 3/ft².

VI. MONITORING

A. 30-Day Post-Planting Monitoring

The restoration contractor will conduct a post-planting assessments to determine the composition and survival of planted nursery stock and cuttings 30 days after all plants are planted (Project Year 2). This provides baseline information for comparison at the end of each growing season (Project Year 2, 3, and 4) and for the Completion Report.

B. Weekly Site Conditions Monitoring

Post planting, the restoration contractor will check in weekly to ensure the site is being managed according to guidelines set forth in this document.

C. End of Growing Season Monitoring

This monitoring will be completed in November (Project Years 2, 3, and 4) before plants go dormant for the winter.

The criteria to evaluate the immediate success of the planting are as follows:

1. To be 90 % certain that the plant composition is within 20% of the true value of the mean density of woody riparian saplings (>1 meter in height) in planting areas on an annual basis.
2. To be 80% certain that the plant composition is within 20% of the true value of the mean relative frequency of each species of hand planted nursery stock and cuttings in each planting area on an annual basis.
3. To be 90% certain that the plant composition is within 20% of the mean height of each riparian species. These are separated (as trees or shrubs) in each of the planting areas on an annual basis.

End of Growing Season Monitoring is an interim assessment of the planting unit to determine success at the end of each planting season. This information is summarized in the Annual Reports.

D. Annual Reports

Annual reports will be prepared by the restoration contractor summarizing restoration activity for that year. The survivorship and height for each planted species are detailed and included in the report in tabular format. In addition, there will be a summary discussion of the previous year's work activities and the results of the survivorship and height data. Annual reports will be submitted by January 31, Project Years 3, 4, and 5.

If the Year 2 or Year 3 Annual Report indicate less than 80% overall survival for a community, the restoration contractor will replant where necessary to ensure achieving a minimum 80% survival rate for each community by the overstory restoration project completion date (December 31, Project Year 4).

E. Completion Report

A completion report will be prepared at the end of the 3-year maintenance phase (January 31, Project Year 5) to report the final survivorship and height of the restoration planting. Data on survivorship and height of the planted species will be provided in tabular format accompanied by text that will explain all activities during the 3-year maintenance phase and a summary discussion of the survivorship and height data of the restoration planting.

Appendices

Appendix 1: Singh Public Recreation Conceptual Plan

Appendix 2: Singh Cultivated Restoration Plant Composition

Maps

Map 1: Singh Property Location Map

Map 2: Singh Estimated Flood Recurrence Interval Map

Map 3: Singh Restoration Communities

References

Ayres Associates, 2007. Flood Neutral Hydraulic Analysis for the Singh and Singh Properties, River Miles 195-194

Bryant, M. D. 1983. The role and management of woody debris in west coast salmonid nursery streams. *North American Journal of Fisheries Management* 3:322-330.

CALFED Bay-Delta Program. 2000. Multi-Species Conservation Strategy.

Castelle, A.J., A.W. Johnson, and C. Conolly. 1994. Wetland and stream buffer size requirements - a review. *Journal of Environmental Quality*. 23(5): 878-882.

California State Lands Commission. 1993. California's Rivers: A Public Trust Report. 334pp.

Dittes and Guardino Consulting. 2006. Singh Property – Riparian Restoration Baseline Assessment.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game, Sacramento, CA

Katibah, E.D. 1984. A brief history of riparian forests in the Central Valley of California, pp. 23-29. *In* R.E. Warner and K.M. Hendrix (eds.) *California Riparian Systems: Ecology, Conservation, and Production Management*. University of California Press. Berkeley, CA

Micheli, E. R., J. W. Kirschner, and E. W. Larsen. 2004. Quantifying the effect of riparian forest versus agricultural vegetation on river meander migration rates, Central Sacramento River, California, USA. *River Research and Applications*. 20: 537-548.

Peterson, D. R. 2002. The Development of an Alternative Restoration Strategy for the Sacramento River Riparian Forest. M.S. Thesis, California State University, Chico.

Vaghti, M.G. 2003. Riparian vegetation classification in relation to environmental gradients, Sacramento River, California. M.S. Thesis. University of California, Davis.

Appendix 1. Singh Conceptual Public Recreation Plan

See Appendix D of
the EIR

Appendix 2. Singh Cultivated Restoration Plant Composition

Valley Oak Riparian Forest (VORF)

Phase 1 - Manual Planting

Density (plant by row)	11' x 30'
Emitter Density per Acre	132
Acres	18.9
Target Planting Date	Spring, Project Year 2
Total Locations	2,495
Total Plants	4,990

Canopy Structure	Species		Frequency	Total
Overstory	<i>Platanus racemosa</i>	Western sycamore	19%	474
	<i>Quercus lobata</i>	Valley oak	35%	873
Midstory	<i>Acer negundo</i>	Box elder	10%	249
	<i>Fraxinus latifolia</i>	Oregon ash	10%	249
Understory	<i>Baccharus pilularis</i>	Coyote brush	6%	150
	<i>Rosa californica</i>	California rose	10%	249
	<i>Rubus ursinus</i>	California blackberry	5%	125
	<i>Toxicodendron diversilobum</i>	Poison oak	5%	125
			100%	2495
Herbaceous	<i>Carex barbarae</i>	Santa Barbara sedge	40%	998
	<i>Muhlenbergia rigens</i>	Deergrass	10%	249
Forbs	<i>Artemisia douglasiana</i>	Mugwort	10%	249
	<i>Euthamia occidentalis</i>	California goldenrod	10%	249
	<i>Urtica dioecia</i>	Hoary nettle	5%	125
	<i>Oenothera hookeri</i>	Primrose	5%	125
Vines	<i>Aristolochia californica</i>	California pipevine	13%	324
	<i>Clematis ligusticifolia</i>	Clematis	5%	125
	<i>Vitis californica</i>	California grape	2%	50
			100%	2495

Phase 2 - Direct Understory Seeding

Acres	18.9
Seeding rate (lb/acre)	13
Target Planting Date	December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	20%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	20%
<i>Nasella pulchra</i>	Llano Seco	35%
		100%

Mixed Riparian Forest (MRF)

Phase 1 - Manual Planting

Density (plant by row)	11' x 30'
Emitter Density per Acre	132
Acres	6.1
Target Planting Date	Spring, Project Year 2
Total Locations	805
Total Plants	1,208

Canopy Structure	Species		Frequency	Total
Overstory	<i>Platanus racemosa</i>	Western sycamore	22%	177
	<i>Populus fremontii</i>	Fremont cottonwood	14%	113
	<i>Quercus lobata</i>	Valley oak	12%	97
Midstory	<i>Acer negundo</i>	Box elder	12%	97
	<i>Baccharis salicifolia</i>	Mule fat	6%	48
	<i>Fraxinus latifolia</i>	Oregon ash	10%	81
	<i>Salix gooddingii</i>	Goodding's willow	5%	40
	<i>Salix lasiolepis</i>	Arroyo willow	5%	40
Understory shrubs	<i>Baccharus pilularis</i>	Coyote brush	2%	16
	<i>Rosa californica</i>	California rose	2%	16
	<i>Rubus ursinus</i>	California blackberry	5%	40
	<i>Toxicodendron diversilobum</i>	Poison oak	5%	40
				100%
Herbaceous	<i>Carex barbarae</i>	Santa Barbara sedge	20%	161
	<i>Muhlenbergia rigens</i>	Deergrass	5%	40
Forbs	<i>Artemisia douglasiana</i>	Mugwort	10%	81
	<i>Euthamia occidentalis</i>	California goldenrod	5%	40
	<i>Urtica dioecia</i>	Hoary nettle	3%	24
	<i>Oenothera hookeri</i>	Primrose	2%	16
Vines	<i>Aristolochia californica</i>	California pipevine	2%	16
	<i>Clematis ligusticifolia</i>	Clematis	2%	16
	<i>Vitis californica</i>	California grape	1%	8
			50%	403

Phase 2 - Direct Understory Seeding

Acres	8.3
Seeding rate (lb/acre)	13
Target Planting Date	December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	40%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	35%
		100%

Cottonwood Riparian Forest (CWRP)

Phase 1 - Manual Planting

Density (plant by row)	11' x 30'
Emitter Density per Acre	132
Acres	5
Target Planting Date	Spring, Project Year 2
Total Locations	660
Total Plants	990

Canopy Structure	Species		Frequency	Total
Overstory	<i>Platanus racemosa</i>	Western sycamore	18%	119
	<i>Populus fremontii</i>	Fremont cottonwood	23%	152
	<i>Quercus lobata</i>	Valley oak	12%	79
Midstory	<i>Acer negundo</i>	Box elder	4%	26
	<i>Alnus rhombifolia</i>	White alder	2%	13
	<i>Baccharis salicifolia</i>	Mule fat	5%	33
	<i>Fraxinus latifolia</i>	Oregon ash	5%	33
	<i>Salix gooddingii</i>	Goodding's willow	5%	33
	<i>Salix lasiolepis</i>	Arroyo willow	4%	26
Understory	<i>Baccharus pilularis</i>	Coyote brush	2%	13
	<i>Rosa californica</i>	California rose	5%	33
	<i>Rubus ursinus</i>	California blackberry	10%	66
	<i>Toxicodendron diversilobum</i>	Poison oak	5%	33
			100%	660
Herbaceous	<i>Carex barbarae</i>	Santa Barbara sedge	20%	132
	<i>Carex praegracilis</i>	Slender sedge	5%	33
	<i>Muhlenbergia rigens</i>	Deergrass	2%	13
Forbs	<i>Artemisia douglasiana</i>	Mugwort	4%	26
	<i>Urtica dioecia</i>	Hoary nettle	10%	66
Vines	<i>Aristolochia californica</i>	California pipevine	5%	33
	<i>Clematis ligusticifolia</i>	Clematis	3%	20
	<i>Vitis californica</i>	California grape	1%	7
		50%	330	

Phase 2 - Direct Understory Seeding

Acres	5
Seeding rate (lb/acre)	13
Target Planting Date	December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	30%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	45%
		100%

Flow Thru Meadow Direct Seeding

Acres 2.6
Seeding rate (lb/acre) 13
Target Planting Date December, Project Year 2

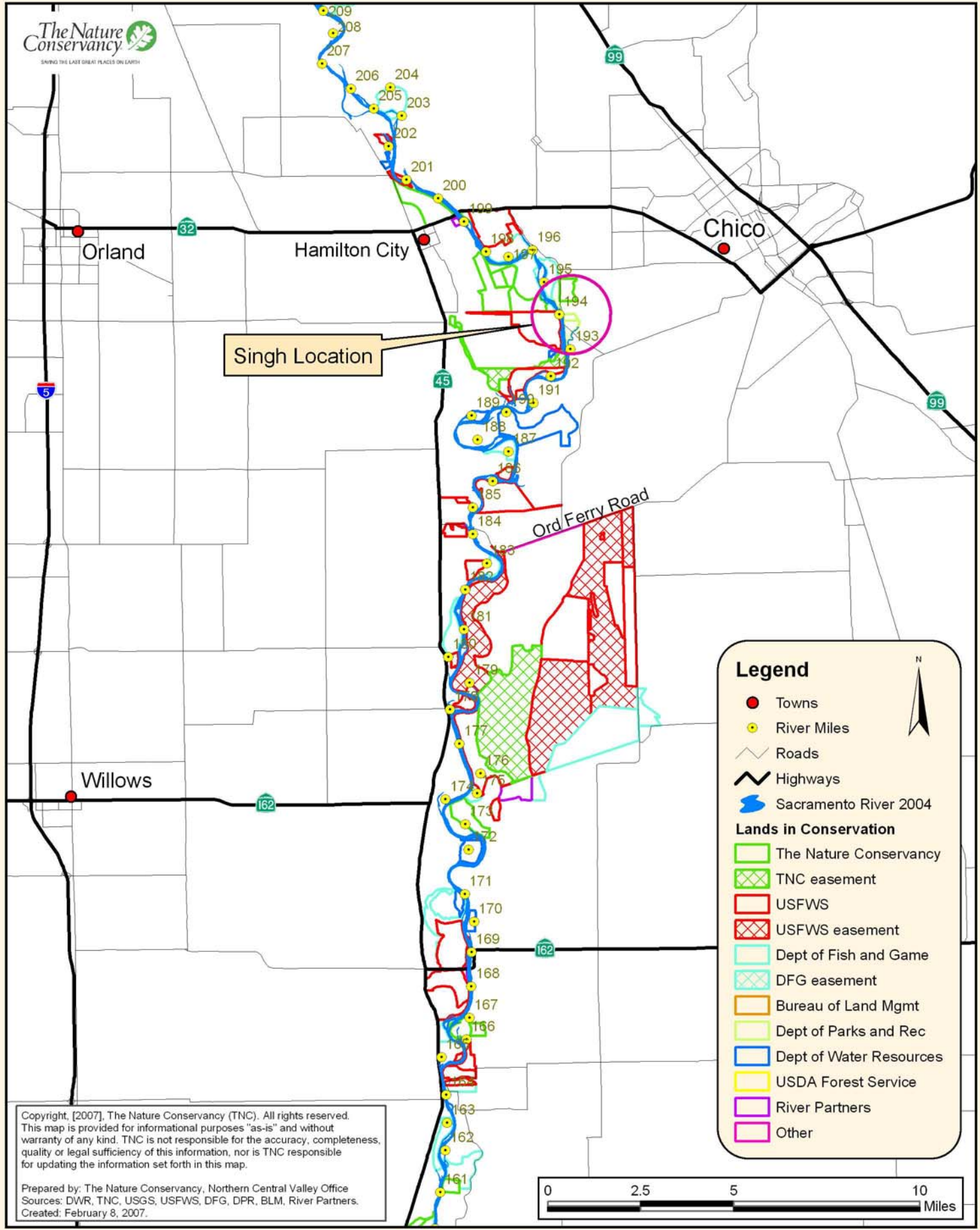
Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	20%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	20%
<i>Nasella pulchra</i>	Llano Seco	35%
		100%

Northern Grass Buffer Direct Seeding

Acres 3.3
Seeding rate (lb/acre) 13
Target Planting Date December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	20%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	20%
<i>Nasella pulchra</i>	Llano Seco	35%
		100%

Map 1. Singh Location

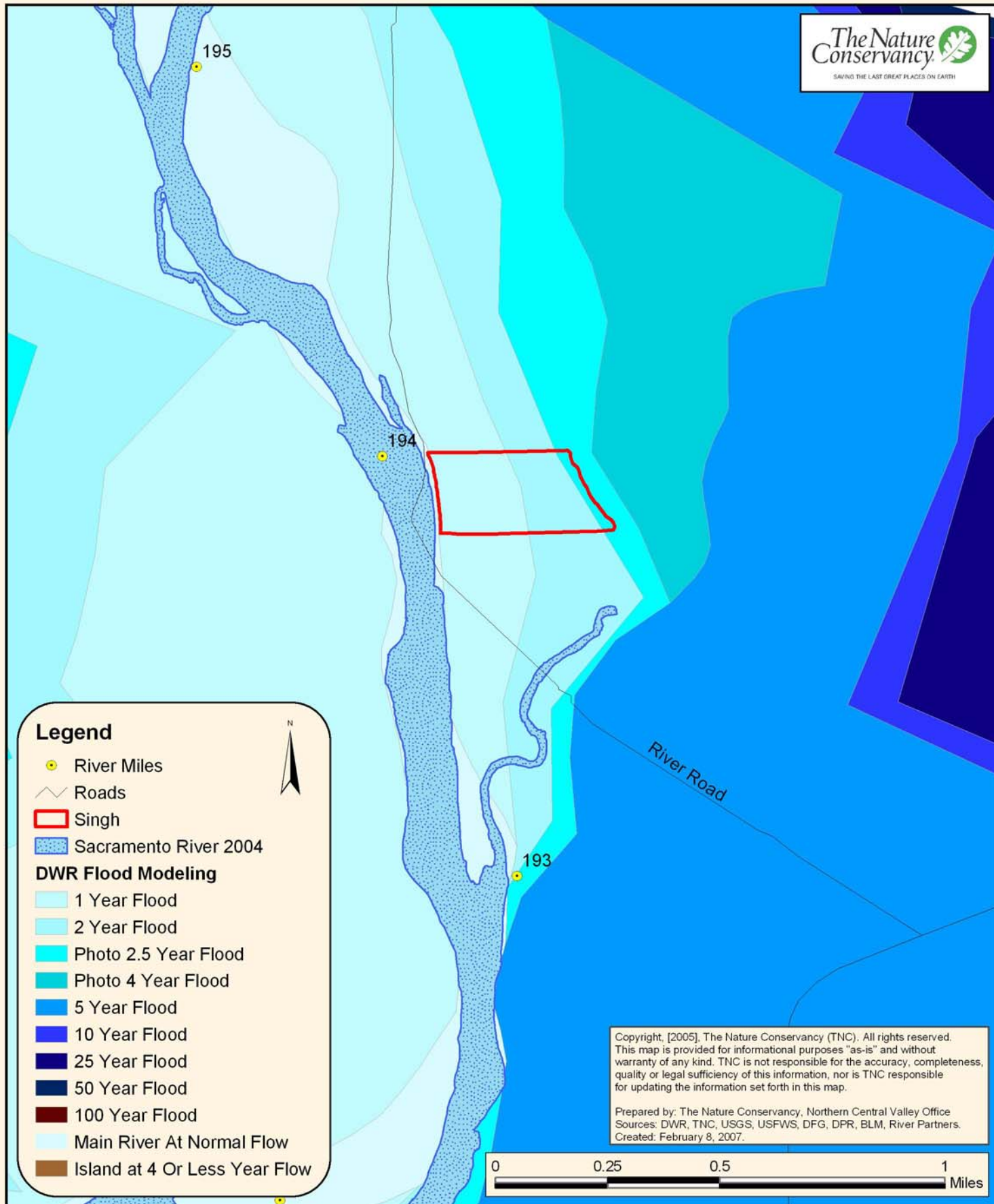


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Prepared by: The Nature Conservancy, Northern Central Valley Office
 Sources: DWR, TNC, USGS, USFWS, DFG, DPR, BLM, River Partners.
 Created: February 8, 2007.

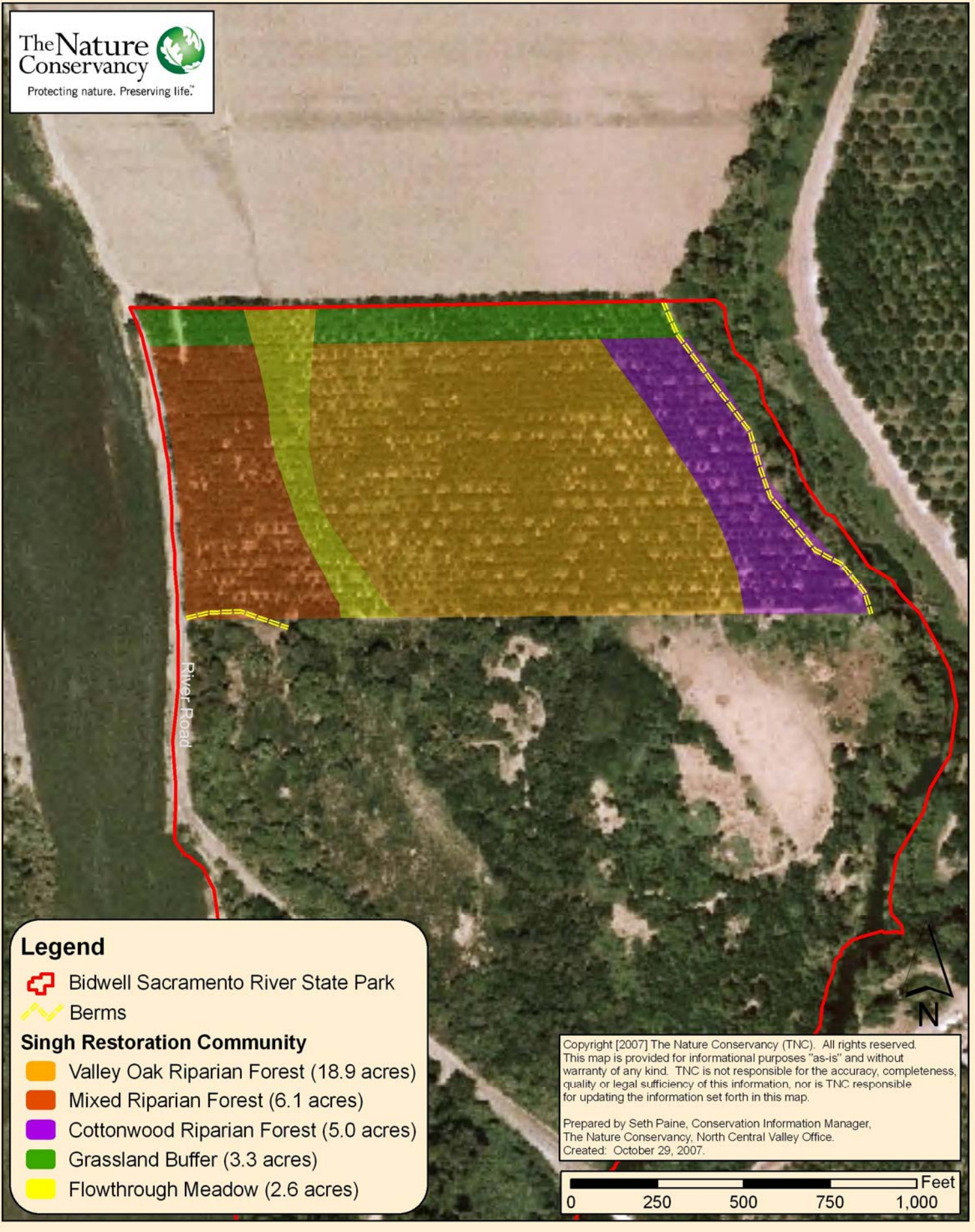


Map 2. Singh Modeled Flood Recurrence Intervals



Map 3. Singh Restoration Communities

The Nature Conservancy
Protecting nature. Preserving life.™



Legend

Bidwell Sacramento River State Park

Berms

Singh Restoration Community

Valley Oak Riparian Forest (18.9 acres)

Mixed Riparian Forest (6.1 acres)

Cottonwood Riparian Forest (5.0 acres)

Grassland Buffer (3.3 acres)

Flowthrough Meadow (2.6 acres)

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Prepared by Seth Paine, Conservation Information Manager,
The Nature Conservancy, North Central Valley Office.
Created: October 29, 2007.

0 250 500 750 1,000 Feet

Restoration Design and Management Plan –
Nicolaus Property (RM 195)

Riparian Habitat Restoration Design and Management Plan

Nicolaus Property

Sacramento River (RM 195)



Prepared by:
**Northern Central Valley Office
500 Main St.
Chico, CA 95928**

April 2008

Prepared for:
**California Department of Parks and Recreation
Bidwell-Sacramento River State Park**

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Appendices

Appendix 1: Nicolaus Public Recreation Conceptual Plan

Appendix 2: Nicolaus Cultivated Restoration Plant Composition

Maps

Map 1: Nicolaus Property Location Map

Map 2: Nicolaus Estimated Flood Recurrence Interval Map

Map 3: Nicolaus Restoration Communities

RESTORATION PLAN SUMMARY

LOCATION	Property Name	Nicolaus
	Street Address	11896 River Road
	City	Chico
	County	Butte
	APNs	039-580-032 & 039-580-032
	River Mile	195
RESTORATION SUMMARY	Restoration site area	140.5 acres
	Plant communities	Recreation Facilities Footprint: 20.1 acres Oak Savanna: 6.5 acres Grassland Buffer: 8.9 acres Valley Oak Riparian Forest: 36.1 acres Mixed Riparian Forest: 15.0 acres Valley Oak Forest: 34.5 acres Cottonwood Riparian Forest: 19.4 acres
	Planting density (spacing): emitters/acre	Recreation Facilities Footprint (Savanna, variable spacing): 50 Savanna (11' x 65'): 50 Valley Oak Riparian Forest (11' x 30'): 132 Mixed Riparian Forest (11' x 30'): 132 Valley Oak Forest (11' x 30'): 132 Cottonwood Riparian Forest (11' x 30'): 132

EXECUTIVE SUMMARY

The Nature Conservancy (TNC) has agreed to design a riparian habitat restoration plan for the Nicolaus Property (the Property). It is anticipated that the Property will be transferred from TNC to the Department of Parks and Recreation and be included in the Bidwell-Sacramento River State Park complex located on River Road, Butte County, California. Habitat restoration (the Project) at Nicolaus can not proceed until an environmental assessment is completed, expected in summer 2008. The restoration planning and CEQA analysis for Nicolaus are being funded by a grant to TNC from the Department of Fish and Game's Ecosystem Restoration Program (Grant # ERP-02-P16D).

The Riparian Restoration Plan for Nicolaus details the restoration plan agreed upon by members of TNC's Sacramento River Project team and approved by the California Department of Parks and Recreation's Northern Buttes District. The restoration plan is based on implementation techniques practiced and refined by TNC on prior restoration projects along the Sacramento River since 1989. This restoration plan describes a specific restoration design based on the environmental conditions and ecological goals at the Nicolaus Property, and the procedures for implementation of site preparation, planting/seeding, maintenance, and monitoring.

INTRODUCTION

A. Location

The Property is located along the eastern bank of the Sacramento River at River Mile 195 (Map 1) and is within the northern part of the Chico Landing Sub-reach (RM 206-178). The Property is in Butte County south of the Sacramento Avenue and River Road junction, west of the City of Chico.

B. Property History

The Property was part of an original Mexican Land Grant purchased by John Bidwell between 1849 and 1851, the grant area was subsequently subdivided and sold as smaller parcels in later years.

The oldest aerial photograph of the area is from 1924 which shows that the property was already cleared of its riparian vegetation at the time.

C. Significance of Restoration

The Sacramento River is a fundamental state water source that drains 24,000 square miles of the northern Central Valley and supplies 80% of freshwater flowing into the Bay-Delta (CA State Lands Commission 1993). Historically, the river was lined by approximately 800,000 acres of riparian forest (Katibah 1984). Over 95% of this habitat has been lost, however, to selective logging, agriculture, urban development, and flood control and power generation projects. Cumulatively, these changes have greatly stressed the Sacramento River and associated species. The loss and degradation of riparian habitat has greatly diminished the river's ability to support viable wildlife populations and encouraged the invasion and proliferation of non-native invasive species. Two-thirds of the linear extent of the river's banks have been modified and confined by levees and riprap. Channelization, bank protection, and the construction of the Shasta Dam degraded riparian habitat along the Sacramento River by restricting the dynamic forces that promote natural habitat succession and regeneration.

Healthy riparian habitats contain a great number of flora and fauna due to the range of community types, overall structural diversity, availability of water and soil moisture, potential as corridors for migration, and critical breeding grounds (California State Lands Commission 1993, California Resources Agency 2000). Additionally, riparian corridors provide two primary functions essential to maintaining water quality: 1) moderating stream temperature and 2) reducing sediments and nutrients emanating from upland agriculture (Castelle *et al.* 1994). The loss of high-quality habitat and the decrease in water quality along the Sacramento River has caused many native species populations to become critically endangered. Important at-risk species include the Sacramento splittail, green sturgeon, chinook salmon, steelhead trout, western yellow-billed cuckoo, Swainson's hawk, least Bell's vireo, and Valley elderberry longhorn beetle (VELB) (CALFED Multi-Species Conservation Strategy 2000).

Although severely degraded, the Sacramento River is still the most diverse and extensive river ecosystem in California (California State Lands Commission 1993). In an effort to improve ecosystem health in the region, federal, state, and local governments, as well as non-government organizations, have begun to implement a series of ecosystem restoration programs along the river. In 1986, the California State Legislature passed Senate Bill 1086, which mandated the development of a management plan for the Sacramento River and its tributaries to protect, restore, and enhance fisheries and riparian habitat (California Resources Agency 2000). The Sacramento River Conservation Area Forum (SRCAF) non-profit organization formed and set as its primary goal the

preservation of remaining riparian habitat and reestablishment of a continuous riparian corridor along the Sacramento River from Red Bluff to Colusa.

D. Agreements

Under a grant agreement between DFG and TNC (agreement # ERP-02D-P16D), TNC is to develop a restoration plan for the Property and conduct a CEQA analysis on the proposed restoration. This document helps fulfill those obligations.

E. Objectives

1. Short-term objective

After funding is secured and the CEQA process is successfully completed, the short-term goal for the Project is to plant a diverse mosaic of riparian communities on 132 acres in spring Project Year 2. Exotic weeds that inhibit seedling establishment of native riparian vegetation and a diminished flood disturbance regime limit natural establishment of floodplain riparian communities, therefore it is necessary to conduct active horticultural restoration such as planned for the restoration at the Property (Peterson 2002). Restoration on this site facilitates the establishment of native riparian habitat that without active cultivated restoration would return to native vegetation at a very slow rate or not return at all.

2. Long-term ecological objectives

The long-term goal of the Project is to improve the ecological health and long-term viability of at-risk species and riparian communities along the Sacramento River by restoring riparian habitat and improving water quality through active horticultural restoration.

Based on the ecological conditions found in naturally occurring riparian forests along the Sacramento River from Red Bluff to Colusa, TNC's ecological objectives for the Property are:

a. To establish early-successional stage and late-successional-stage riparian communities which have been severely reduced in extent along the Sacramento River since 1850.

The Project will add riparian habitat to an ecologically important tributary area, tributary areas are vital to the health and survival of riparian obligate species. Restoring complex riparian habitat in the area will improve habitat for fish and wildlife. Fish benefit from complex riparian areas that become flooded at high flows, slow floodwaters down and provide refugia for young and juvenile fish. Additionally, large woody debris, a result of increased riparian habitat, provides food and cover for critical life stages of anadromous fish (Bryant 1983).

b. To provide habitat for neo-tropical migrant land birds.

Both aquatic and terrestrial at-risk riparian species, as well as common riparian species, will benefit from protection and restoration of large expanses of habitat along the mainstem and at the confluences of tributaries to the Sacramento River.

c. Improve water quality by decreasing sediment and pesticide runoff into the Sacramento River.

Replacing flood-prone agriculture with restored riparian habitat will decrease pesticide and herbicide applications on land adjacent to the river, thereby increasing water and sediment quality. Additionally, restored riparian forests will buffer and filter toxic and organic matter that originate further away from the river, thereby further enhancing water and sediment quality

3. Management Objectives

The management objectives, which are implementation standards for achieving the ecological objectives, are outlined as follows:

- a. Meet, or exceed, a survival of at least 80% planted woody plants three years after planting (December of Project Year 4).
- b. Meet, or exceed, herbaceous density of 80% or greater by December of Project Year 4.
- c. Ensure that the restoration site has a woody plant species diversity comparable to nearby remnant mixed riparian forest.

4. Public Recreation and Access

DPR and TNC have developed a conceptual public use and access plan as part of the overall planning grant to TNC. See Appendix 1 for the conceptual public access plan for the Property. A campground with vaulted toilets and hiking trails is tentatively planned for the Nicolaus property.

F. Permits and Environmental Documentation

1. CEQA

Working with DPR, TNC will complete the necessary CEQA documents for this restoration project. DPR is the lead agency for the CEQA analysis while EDAW, Inc, Sacramento, is the consulting firm hired by TNC to conduct the CEQA analysis.

2. Floodplain Encroachment Permit

As part of the project, TNC will work with DPR to secure a floodplain encroachment permit if necessary.

3. Pesticide Use Permits

When restoration of the Property is initiated, the restoration contractor will need to follow all Butte County and State of California pesticide use laws when applying herbicides for weed control in the restoration area. .

II. SCHEDULE OF ACTIVITIES

The timing of the annual activities is outlined below.

	Responsible Party	Project Year 1				Project Year 2				Project Year 3				Project Year 4			
		W	SP	SU	F	W	SP	SU	F	W	SP	SU	F	W	SP	SU	F
PLANNING																	
*CEQA	TNC																
**Restoration Plan	TNC, DPR																
PROPOGATION																	
***Seed collection	RC																
Nursery	RC																
Cutting collection	RC																
FIELDWORK																	
Orchard removal	RC																
Field preparation	RC																
Layout	RC																
Overstory planting	RC																
Understory planting	RC																
Understory seeding	RC																
MAINTENANCE																	
Weed control	RC																
Irrigation	RC																
MONITORING																	
Post-planting	RC																
Regular check-in	RC																
End of Season	RC																
REPORTING																	
Annual	RC																
Completion****	RC																

*completed in 2008

** completed in 2007

*** to be completed prior to Year 1

**** to be completed in January Project Year 5

R.C. = restoration contractor

III. PLANNING

A. Site Assessment

Information collected for the preparation of the restoration plan includes seven parameters: vegetation on and nearby the site, native fish and wildlife usage, soil profile, regional hydrology, depth to water table, historic geomorphic condition, and topography. Hydraulic modeling results from the Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties, River Miles 195-194 (Ayres Associates, 2008) are used to verify that the planned restoration will result in no net increase in flood water surface levels on the restoration site.

The information from the site assessment is used to determine the flooding regime, drainage, riparian restoration communities, and plant species appropriate for planting the site. The structure, or appearance of a riparian forest is dictated by these factors. Some influences can be seen

immediately on a restoration site and others may not be seen for many years or even decades. For example, gravel inclusions in the soil profile cause immediate mortality of planted trees due to lack of water, whereas the effects of hydrology on reproduction of specific species in a planting is not apparent for many years.

A site assessment for the Property was conducted by Dittes and Guardino Consulting (2006). The assessment is no file at the TNC office in Chico, CA and the Department of Parks and Recreation also has a copy. The information collected in the Property site assessment is summarized below.

1. Soil Profile

A soil survey was conducted in summer 2006 with 23 soil cores taken across the property. There are two primary soil types on the property, Kusal Slough Silty Clay Loam, Parrott Silt Loam (covering 92% of the property), and Xerofluvents (USDA-NRCS classification, in prep).

In summer 2006 the water table was located between 10 feet 3 inches in the northeast corner to 16 feet 1 inch in the northeast corner of the Property, average water table depth is 13 feet 2 inches. The shallowest water table depths were located adjacent to Mud Creek and Kusal Slough confluence indicating ground water from this confluence is influencing the water table on the eastern portion of the property. Of the 23 soil cores taken, 20 reached the water table. Three soil cores reached gravel lenses, all located in the central area of the Property.

2. Vegetation

Unit specific qualitative descriptions of dominant tree, shrub, and native understory species in adjacent riparian areas give valuable insight as to what species are appropriate for restoring a site. A vegetation assessment was conducted in summer 2006 on remnant habitats located along Mud Creek as well as on the Indian Fishery-Chico Landing Unit and Big Chico Creek Riparian Area of the Bidwell Sacramento River State Park. These remnant riparian habitats serve as models for the species composition and relative species frequencies for the cottonwood riparian and mixed riparian forest restoration communities to be established on the Property. The valley oak savanna and valley oak riparian forest communities to be established on the Property are no longer represented locally as this community has been cleared for agriculture use; TNC relies on habitat composition descriptions from Holland (1986) and Vaghti (2003) to reconstruct these rare communities.

3. Hydrology and Geomorphology

The site is located on a stable upland landform adjacent to the Sacramento River. The majority of the property is within the 1 to 2 year flood recurrence interval period with the very southwest portion in the 2.5 year return interval period (Map 2). The property floods regularly in the winter which dictates a spring planting schedule. Once the riparian plant communities are established it is anticipated that the current erosion problems on the property will diminish significantly. It has been demonstrated that floodplains of the Sacramento River are less prone to erosion and more stable when riparian habitat is present as opposed to agricultural land cover (Micheli et al., 2004).

4. Native Fish and Wildlife Usage

Special status species that are expected to benefit from the Nicolaus restoration include the American Bald eagle (state threatened), Valley Elderberry Longhorn Beetle (federally-threatened), steelhead (Central Valley evolutionarily significant unit), Chinook salmon – spring run (federally threatened), state threatened), Chinook salmon – winter run (federally threatened, state threatened), Swainson’s hawk (state threatened), Least Bell’s vireo (federally endangered, state endangered), and western yellow-billed cuckoo (federal candidate, state endangered).

Other special status species known to occur on or near the Property that may benefit from the restoration include: Sacramento valley tiger beetle, green sturgeon, hardhead, western pond turtle, American white pelican, bank swallow, California Horned lark, great blue heron, great egret, Least Bittern, little willow flycatcher, logger head shrike, mountain plover, tricolored blackbird, yellow-breasted chat, double-crested cormorant, osprey, northern harrier, sharp-shinned hawk, Cooper’s hawk, peregrine falcon, prairie falcon, northern harrier, ferruginous hawk, short-eared owl, long-eared owl, white-tailed kite, yuma myotis, pallid bat, Townsend’s big-eared bat, western red bat, and western small-footed myotis.

B. Cultivated Restoration Design

Communities planned for habitat restoration are based on site assessments (including soil profile, topography, flood frequency, depth to groundwater at base flows, weed community, and the existing adjacent riparian community) and historic aerial photography. Species composition is determined by the ecological objectives, existing native species at and around the Property, and available understory seed.

Point Reyes Bird Observatory (PRBO) monitors bird usage on habitats of the Sacramento River. PRBO has provided TNC with recommendations for restoring appropriate breeding and foraging habitat for riparian obligate songbirds. PRBO has recommended establishing communities with a diverse canopy structure both horizontally and vertically across any given restoration site. This will be accomplished at the Property by restoring a mosaic of habitat types across the Property. In addition, the restoration plantings will include areas where trees are clumped and interspersed with more open areas dominated by lower stature shrubs and forbs. This allows for usage of the site by a diverse array of wildlife species that require different habitat structure and composition types.

1. Restoration Communities

The Property will be planted with the following plant communities (Holland 1986): grass buffer (8.9 acres), mixed riparian forest (15.0 acres), valley oak forest (34.5 acres), valley oak riparian forest (36.1 acres), cottonwood riparian forest (19.4 acres), and campground/facilities footprint (valley oak savanna landscaping, 20.1 acres), and valley oak savanna (6.5 acres). See Map 3 for a detailed restoration community layout plan. The species composition for these communities is listed in Appendix 1.

2. Planting Design

The arrangement of plants across the site in any given 10 row by 10 plant area will be arranged to maximize structural and compositional diversity both vertically and horizontally across the field. At each location, spaced 11 feet along the planting strips, one or two plants

will be planted according to the community-specific planting composition. The planting strips will be aligned with the contour of the river on the west side and Mud Creek on the east side of the Property.

Planting strips in the mixed riparian forest, valley oak riparian forest, valley oak forest, and cottonwood riparian forest will be spaced 30 feet apart; the campground area will have variable plant spacings that will be integrated into the campground layout; the oak savanna planting rows will be spaced 65 feet apart. Where appropriate, an understory plant (shrub, forb, grass, or vine) will be planted either next to an overstory plant or clustered with other understory plants. This planting scheme allows for the vertical and horizontal structural diversity described in Section III. B. above. Refer to Appendix 1 for the planting composition of each community.

3. Plant Propagation

Appendix 1 lists plant propagation method (container, cutting, plug, drilling) used for each species. Container plants are raised from seeds or cuttings collected from the Sacramento River floodplain and have been propagated by CSU Chico, Floral Native Nursery, and Hedgerow Farms for planting as seedlings at the Property. Willow and cottonwood cuttings refer to branches about 1" in diameter cut from mature cottonwood and willow trees and planted directly into the field. Cuttings are taken no more than 5 days prior to planting and soaked for 24 hours before planted. Phase 1 overstory and understory plants will be hand planted in spring of Project Year 2 while the Phase 2 understory grass seed will be directly seeded with a rangeland drill in December of Project Year 2.

The restoration contractor is responsible for the plant propagation for all of the riparian plants. Planting crews are hired and supervised by the restoration contractor.

IV. RESTORATION IMPLEMENTATION

A. Field Preparations

100 acres of walnuts and 32 acres of almonds are to be removed from the property in Project Year 1 and 2 prior to the restoration implementation in Project Year 2.

The restoration contractor is responsible for field preparation prior to planting including clearing debris, disking, weed control (as necessary), and laying out the planting rows. Site layout is the preliminary stage of planting and occurs after field preparations have been completed. Site layout organizes the field according to the details outlined in the plant design (e.g. utilizing different colored flags to mark the planting space for an intended plant species) and is intended to facilitate planting efforts.

B. Irrigation Design and Installation

The restoration contractor will be responsible for modifying the existing irrigation system. A microdrip, hard-hose irrigation system should be installed in spring of Project Year 2.

Important note: The irrigation system must be fully functional prior to planting because immediate irrigation may be needed to reduce transplant shock.

C. Planting

1. Phase 1

The first phase of the planting will be implemented as soon as the threat of flooding is over, the restoration contractor will plant all nursery grown potted stock plants as well as all cottonwood and willow cuttings. Phase 1 planting for the site is scheduled for spring of Project Year 2 (see Appendix 1).

2. Phase 2

This is the understory component of the restoration program; the herbaceous layer will be directly seeded in December of Project Year 3.

Protective milk cartons are to be placed around nursery grown plants and cuttings. The cartons protect the plants from herbicide drift during weed control. Two small bamboo stakes are used to anchor the cartons.

The restoration contractor will use a rangeland drill to direct seed the understory in December of Project Year 3. Understory species used will be local ecotypes, preferably collected within 20 miles of the restoration site. Hedgerow Farms, Winters, CA, produces the appropriate ecotypes for seeding the Property. These ecotypes have been hand picked by TNC staff and supplied to Hedgerow Farms for native grass restoration along the Sacramento River.

V. MAINTENANCE

Maintenance (irrigation and weed control) is scheduled to follow directly after the Phase 1 planting and continue for 3 years. The Phase 2 understory direct seeding planting will be maintained during Project Years 3 and 4.

A. Restoration maintenance (spring Project Year 2 – December Project Year 4)

1. Irrigation

a. Method

Irrigation is the single most important factor in the success of riparian restoration projects in California. Adequate soil moisture allows plants to grow vigorously and compete effectively with weeds. If at anytime it is determined that either irrigation scheduling or the irrigation system is inadequate and plants are not growing actively, TNC will remedy this problem immediately.

b. Standards

Standards are based on plant growth and survival assessed during weekly assessments by the restoration contractor. Adequate soil moisture and weed control must be maintained to ensure vigorous native plant growth. A watering regime will be determined each week according to weather, growing, and site conditions.

2. Weed Control

a. Methods

This site has annual rye grass, Johnson grass, morning glory, chick weed, and other problematic weeds that will inhibit native plant growth if unchecked. Control efforts will concentrate on controlling these noxious weeds through herbicide application, mowing, and disking when and where appropriate. The restoration contractor will use adaptive management to determine best management practices for weed control. Aggressive control by mowing, disking, and herbicide application will control these weeds as a serious problem in the restoration site.

Pesticide Use: The State of California and each county regulate the use of all pesticides, only state and locally approved herbicides will be used on the restoration site. Herbicide applications will be prescribed by a state-licensed PCA (pest control advisor) and applied by state-licensed applicators. Herbicide use will be reported to the county agriculture commission as required by state and county law. Weed control will be conducted year round on an as needed basis.

b. Standards

The height and vigor of weeds on restoration sites has a direct effect on the growth and survival of the cultivated riparian plants. TNC's objective is to optimize growth of the riparian species past a point where they can compete effectively with these exotic plants, envisioned for December Project Year 5. The larger the riparian species the less they are affected by weeds.

Standards for weed control for this project are as follows:

Project Year 2 growing season: No weed growth within the alleyways. Weed growth in the planting strips is kept to less than 6". Weed stem density within the strips should be less than 3/ft². Alleyways to be direct seeded are kept completely clean, no weed growth. Manually remove all weeds growing inside each milk carton.

Project Year 3 growing season: No weed growth within the alleyways. Direct seeded native grass will dominate the alleyways and compete with the non-native weeds. Weed growth in the planting strips is kept to less than 6". Weed stem density within the strips should be less than 3/ft².

Project Year 4 growing season: No weed growth within the alleyways. Direct seeded native grass will dominate the alleyways and compete with non-native weeds. Weed growth in the planting strips is kept to less than 6". Weed stem density within the strips should be less than 3/ft².

VI. MONITORING

A. 30-Day Post-Planting Monitoring

The restoration contractor will conduct a post-planting assessments to determine the composition and survival of planted nursery stock and cuttings 30 days after all plants are planted (Project Year 2). This provides baseline information for comparison at the end of each growing season (Project Year 2, 3, and 4) and for the Completion Report.

B. Weekly Site Conditions Monitoring

Post planting, the restoration contractor will check in weekly to ensure the site is being managed according to guidelines set forth in this document.

C. End of Growing Season Monitoring

This monitoring will be completed in November (Project Years 2, 3, and 4) before plants go dormant for the winter.

The criteria to evaluate the immediate success of the planting are as follows:

1. To be 90 % certain that the plant composition is within 20% of the true value of the mean density of woody riparian saplings (>1 meter in height) in planting areas on an annual basis.
2. To be 80% certain that the plant composition is within 20% of the true value of the mean relative frequency of each species of hand planted nursery stock and cuttings in each planting area on an annual basis.
3. To be 90% certain that the plant composition is within 20% of the mean height of each riparian species. These are separated (as trees or shrubs) in each of the planting areas on an annual basis.

End of Growing Season Monitoring is an interim assessment of the planting unit to determine success at the end of each planting season. This information is summarized in the Annual Reports.

D. Annual Reports

Annual reports will be prepared by the restoration contractor summarizing restoration activity for that year. The survivorship and height for each planted species are detailed and included in the report in tabular format. In addition, there will be a summary discussion of the previous year's work activities and the results of the survivorship and height data. Annual reports will be submitted by January 31, Project Years 3, 4, and 5.

If the Year 2 or Year 3 Annual Report indicate less than 80% overall survival for a community, the restoration contractor will replant where necessary to ensure achieving a minimum 80% survival rate for each community by the overstory restoration project completion date (December 31, Project Year 4).

E. Completion Report

A completion report will be prepared at the end of the 3-year maintenance phase (January 31, Project Year 5) to report the final survivorship and height of the restoration planting. Data on survivorship and height of the planted species will be provided in tabular format accompanied by

text that will explain all activities during the 3-year maintenance phase and a summary discussion of the survivorship and height data of the restoration planting.

Appendices

Appendix 1: Nicolaus Cultivated Restoration Plant Composition

Maps

Map 1: Nicolaus Property Location Map

Map 2: Nicolaus Estimated Flood Recurrence Interval Map

Map 3: Nicolaus Restoration Communities

References

Ayres Associates, 2007. Flood Neutral Hydraulic Analysis for the Nicolaus and Singh Properties, River Miles 195-194

Bryant, M. D. 1983. The role and management of woody debris in west coast salmonid nursery streams. *North American Journal of Fisheries Management* 3:322-330.

CALFED Bay-Delta Program. 2000. Multi-Species Conservation Strategy.

Castelle, A.J., A.W. Johnson, and C. Conolly. 1994. Wetland and stream buffer size requirements - a review. *Journal of Environmental Quality*. 23(5): 878-882.

California State Lands Commission. 1993. California's Rivers: A Public Trust Report. 334pp.

Dittes and Guardino Consulting. 2006. Nicolaus Property – Riparian Restoration Baseline Assessment.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game, Sacramento, CA

Katibah, E.D. 1984. A brief history of riparian forests in the Central Valley of California, pp. 23-29. *In* R.E. Warner and K.M. Hendrix (eds.) *California Riparian Systems: Ecology, Conservation, and Production Management*. University of California Press. Berkeley, CA

Micheli, E. R., J. W. Kirschner, and E. W. Larsen. 2004. Quantifying the effect of riparian forest versus agricultural vegetation on river meander migration rates, Central Sacramento River, California, USA. *River Research and Applications*. 20: 537-548.

Peterson, D. R. 2002. The Development of an Alternative Restoration Strategy for the Sacramento River Riparian Forest. M.S. Thesis, California State University, Chico.

Vaghti, M.G. 2003. Riparian vegetation classification in relation to environmental gradients, Sacramento River, California. M.S. Thesis. University of California, Davis.

Nicolaus Restoration Plan, Sacramento River Mile 195

Appendix 1. Nicolaus Cultivated Restoration Plant Composition

Facilities Footprint (Oak Savanna Landscaping)

Phase 1 - Direct Understory Seeding

Acres	20.1
Seeding rate (lb/acre)	13
Target Planting Date	December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	20%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	20%
<i>Nasella pulchra</i>	Llano Seco	35%
		100%

Phase 2 - Manual Planting

Emitter Density per acre	50
Acres	20.1
Target Planting Date	To be determined
Total Plants	1,005

Canopy Structure	Species		Frequency	Total Plants
Overstory	<i>Quercus lobata</i>	Valley oak	15%	151
	<i>Platanus racemosa</i>	Western sycamore	10%	101
Midstory	<i>Acer negundo</i>	Box elder	5%	50
	<i>Fraxinus racemosa</i>	Oregon ash	5%	50
Understory shrubs	<i>Baccharus pilularis</i>	Coyote brush	5%	50
	<i>Rosa californica</i>	California rose	15%	151
	<i>Rubus ursinus</i>	California blackberry	5%	50
Herbaceous	<i>Muhlenbergia rigens</i>	Deergrass	20%	201
Forbs	<i>Euthamia occidentalis</i>	California goldenrod	10%	101
	<i>Oenothera hookeri</i>	Primrose	10%	101
			100%	1,005

Northern and Southern Grass Buffer Direct Seeding

Acres 8.9
Seeding rate (lb/acre) 13
Target Planting Date December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	20%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	20%
<i>Nasella pulchra</i>	Llano Seco	35%
		100%

Oak Savanna

Phase 1 - Manual Planting

Planting Spacings (plants x row)	11' x 65'
Emitter Density per acre	50
Acres	6.5
Target Planting Date	Spring, Project Year 2
Total Plants	325

Canopy Structure	Species		Frequency	Total Plants
Overstory	<i>Quercus lobata</i>	Valley oak	15%	49
	<i>Platanus racemosa</i>	Western sycamore	10%	33
Midstory	<i>Acer negundo</i>	Box elder	5%	16
	<i>Fraxinus racemosa</i>	Oregon ash	5%	16
Understory shrubs	<i>Baccharus pilularis</i>	Coyote brush	5%	16
	<i>Rosa californica</i>	California rose	15%	49
	<i>Rubus ursinus</i>	California blackberry	5%	16
Herbaceous	<i>Muhlenbergia rigens</i>	Deergrass	20%	65
Forbs	<i>Euthamia occidentalis</i>	California goldenrod	10%	33
	<i>Oenothera hookeri</i>	Primrose	10%	33
			100%	325

Phase 2 - Direct Understory Seeding

Acres	6.5
Seeding rate (lb/acre)	13
Target Planting Date	December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	20%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	20%
<i>Nasella pulchra</i>	Llano Seco	35%
		100%

Valley Oak Riparian Forest (VORF)

Phase 1 - Manual Planting

Planting Spacings (plants x row)	11' x 30'
Emitter Density per acre	132
Acres	36.1
Target Planting Date	Spring, Project Year 2
Total Locations	4,765
Total Plants	9,530

Canopy Structure	Species		Frequency	Total
Overstory	<i>Platanus racemosa</i>	Western sycamore	19%	905
	<i>Quercus lobata</i>	Valley oak	35%	1,668
Midstory	<i>Acer negundo</i>	Box elder	10%	477
	<i>Fraxinus latifolia</i>	Oregon ash	10%	477
Understory	<i>Baccharus pilularis</i>	Coyote brush	6%	286
	<i>Rosa californica</i>	California rose	10%	477
	<i>Rubus ursinus</i>	California blackberry	5%	238
	<i>Toxicodendron diversilobum</i>	Poison oak	5%	238
			100%	4,765
Herbaceous	<i>Carex barbarae</i>	Santa Barbara sedge	40%	1,906
	<i>Muhlenbergia rigens</i>	Deergrass	10%	477
Forbs	<i>Artemisia douglasiana</i>	Mugwort	10%	477
	<i>Euthamia occidentalis</i>	California goldenrod	10%	477
	<i>Urtica dioecia</i>	Hoary nettle	5%	238
	<i>Oenothera hookeri</i>	Primrose	5%	238
Vines	<i>Aristolochia californica</i>	California pipevine	13%	619
	<i>Clematis ligusticifolia</i>	Clematis	5%	238
	<i>Vitis californica</i>	California grape	2%	95
			100%	4,765

Phase 2 - Direct Understory Seeding

Acres	36.1
Seeding rate (lb/acre)	13
Target Planting Date	December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	20%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	20%
<i>Nasella pulchra</i>	Llano Seco	35%
		100%

**Mixed Riparian Forest
(MRF)**

Phase 1 - Manual Planting

Planting Spacings (plants x row)	11' x 30'
Emitter Density per acre	132
Acres	15
Target Planting Date	Spring, Project Year 2
Total Locations	1,980
Total Plants	2,970

Canopy Structure	Species		Frequency	Total
Overstory	<i>Platanus racemosa</i>	Western sycamore	22%	436
	<i>Populus fremontii</i>	Fremont cottonwood	14%	277
	<i>Quercus lobata</i>	Valley oak	12%	238
Midstory	<i>Acer negundo</i>	Box elder	12%	238
	<i>Baccharis salicifolia</i>	Mule fat	6%	119
	<i>Fraxinus latifolia</i>	Oregon ash	10%	198
	<i>Salix gooddingii</i>	Goodding's willow	5%	99
	<i>Salix lasiolepis</i>	Arroyo willow	5%	99
Understory shrubs	<i>Baccharus pilularis</i>	Coyote brush	2%	40
	<i>Rosa californica</i>	California rose	2%	40
	<i>Rubus ursinus</i>	California blackberry	5%	99
	<i>Toxicodendron diversilobum</i>	Poison oak	5%	99
			100%	1,980
Herbaceous	<i>Carex barbarae</i>	Santa Barbara sedge	20%	396
	<i>Muhlenbergia rigens</i>	Deergrass	5%	99
Forbs	<i>Artemisia douglasiana</i>	Mugwort	10%	198
	<i>Euthamia occidentalis</i>	California goldenrod	5%	99
	<i>Urtica dioecia</i>	Hoary nettle	3%	59
	<i>Oenothera hookeri</i>	Primrose	2%	40
Vines	<i>Aristolochia californica</i>	California pipevine	2%	40
	<i>Clematis ligusticifolia</i>	Clematis	2%	40
	<i>Vitis californica</i>	California grape	1%	20
			50%	990

Phase 2 - Direct Understory Seeding

Acres	15
Seeding rate (lb/acre)	13
Target Planting Date	December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	30%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	45%
		100%

Valley Oak Forest (VOF)

Phase 1 - Manual Planting

Planting Spacings (plants x row)	11' x 30'
Emitter Density per acre	132
Acres	34.5
Target Planting Date	Spring, Project Year 2
Total Locations	4,554
Total Plants	9,108

Canopy Structure	Species		Frequency	Total
Overstory	<i>Platanus racemosa</i>	Western sycamore	15%	683
	<i>Quercus lobata</i>	Valley oak	40%	1,822
Midstory	<i>Acer negundo</i>	Box elder	10%	455
Understory	<i>Baccharus pilularis</i>	Coyote brush	10%	455
	<i>Rosa californica</i>	California rose	10%	455
	<i>Rubus ursinus</i>	California blackberry	10%	455
	<i>Toxicodendron diversilobum</i>	Poison oak	5%	228
			100%	4,554
Herbaceous	<i>Carex barbarae</i>	Santa Barbara sedge	15%	683
Forbs	<i>Muhlenbergia rigens</i>	Deergrass	10%	455
	<i>Artemisia douglasiana</i>	Mugwort	10%	455
	<i>Euthamia occidentalis</i>	California goldenrod	20%	911
	<i>Urtica dioecia</i>	Hoary nettle	10%	455
Vines	<i>Oenothera hookeri</i>	Primrose	10%	455
	<i>Aristolochia californica</i>	California pipevine	16%	729
	<i>Clematis ligusticifolia</i>	Clematis	7%	319
	<i>Vitis californica</i>	California grape	2%	91
			100%	4,554

Phase 2 - Direct Understory Seeding

Acres	34.5
Seeding rate (lb/acre)	13
Target Planting Date	December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	20%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	20%
<i>Nasella pulchra</i>	Llano Seco	35%

100%

Cottonwood Riparian Forest (CWRP)

Phase 1 - Manual Planting

Density (plant by row)	11' x 30'
Emitter Density per acre	132
Acres	19.4
Target Planting Date	Spring, Project Year 2
Total Locations	2,561
Total Plants	3,841

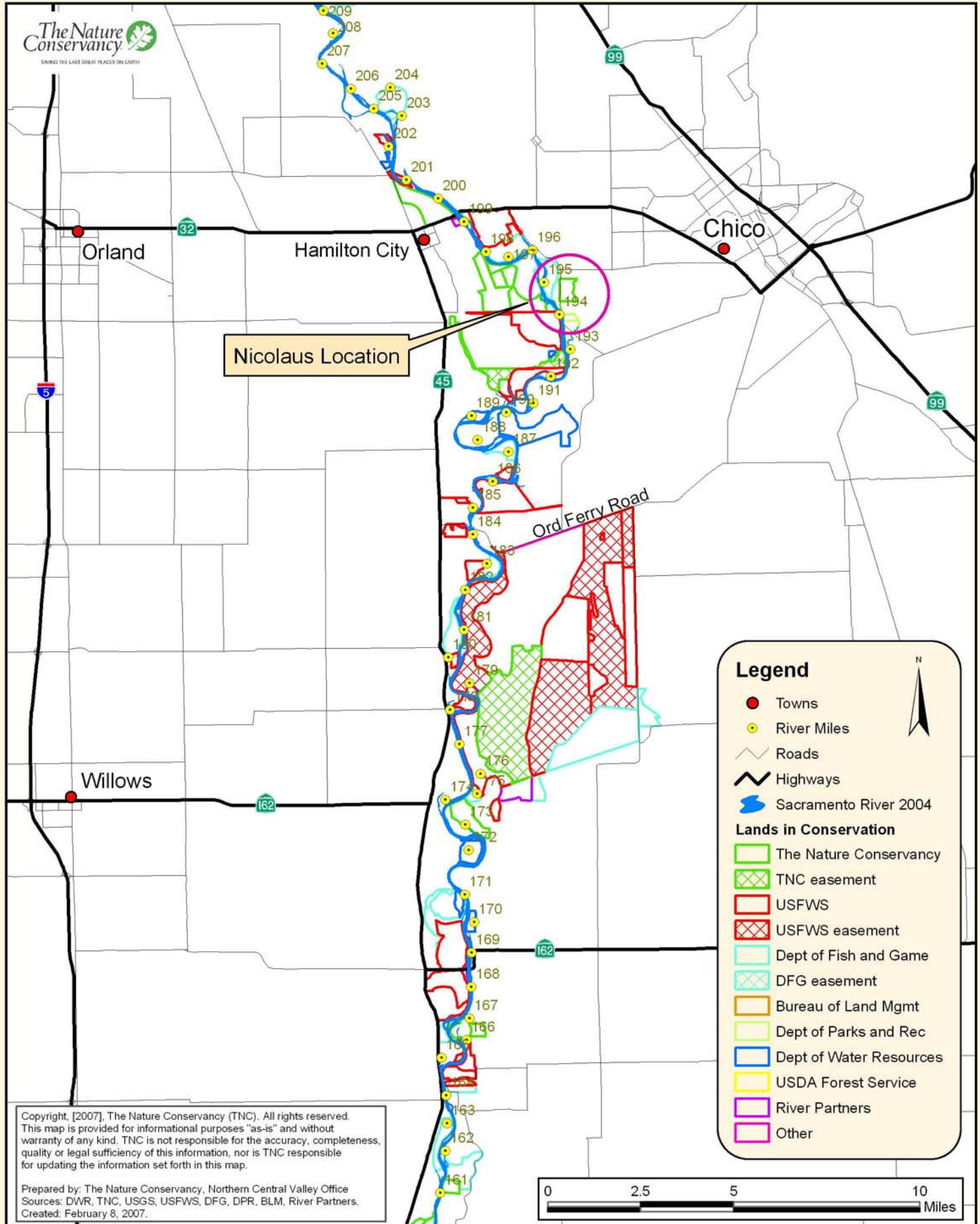
Canopy Structure	Species		Frequency	Total
Overstory	<i>Platanus racemosa</i>	Western sycamore	18%	461
	<i>Populus fremontii</i>	Fremont cottonwood	23%	589
	<i>Quercus lobata</i>	Valley oak	8%	205
Midstory	<i>Acer negundo</i>	Box elder	2%	51
	<i>Alnus rhombifolia</i>	White alder	2%	51
	<i>Baccharis salicifolia</i>	Mule fat	5%	128
	<i>Fraxinus latifolia</i>	Oregon ash	5%	128
	<i>Salix gooddingii</i>	Goodding's willow	9%	230
	<i>Salix lasiolepis</i>	Arroyo willow	9%	230
	<i>Toxicodendron diversilobum</i>	Poison oak	5%	128
			100%	2,561
Herbaceous	<i>Carex barbarae</i>	Santa Barbara sedge	20%	512
	<i>Carex praegracilis</i>	Slender sedge	5%	128
	<i>Muhlenbergia rigens</i>	Deergrass	2%	51
Forbs	<i>Artemisia douglasiana</i>	Mugwort	4%	102
	<i>Urtica dioecia</i>	Hoary nettle	10%	256
Vines	<i>Aristolochia californica</i>	California pipevine	5%	128
	<i>Clematis ligusticifolia</i>	Clematis	3%	77
	<i>Vitis californica</i>	California grape	1%	26
			50%	1,280

Phase 2 - Direct Understory Seeding

Acres	19.4
Seeding rate (lb/acre)	13
Target Planting Date	December, Project Year 2

Grass Species	Ecotype	Seeding Rate
<i>Elymus glaucus</i>	Parrott	30%
<i>Hordeum brachyantherum</i>	Yolo Co.	25%
<i>Leymus triticoides</i>	Yolo Co.	45%
		100%

Map 1. Nicolaus Location

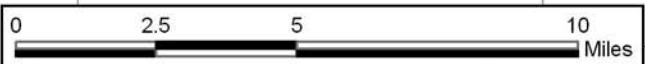


Legend

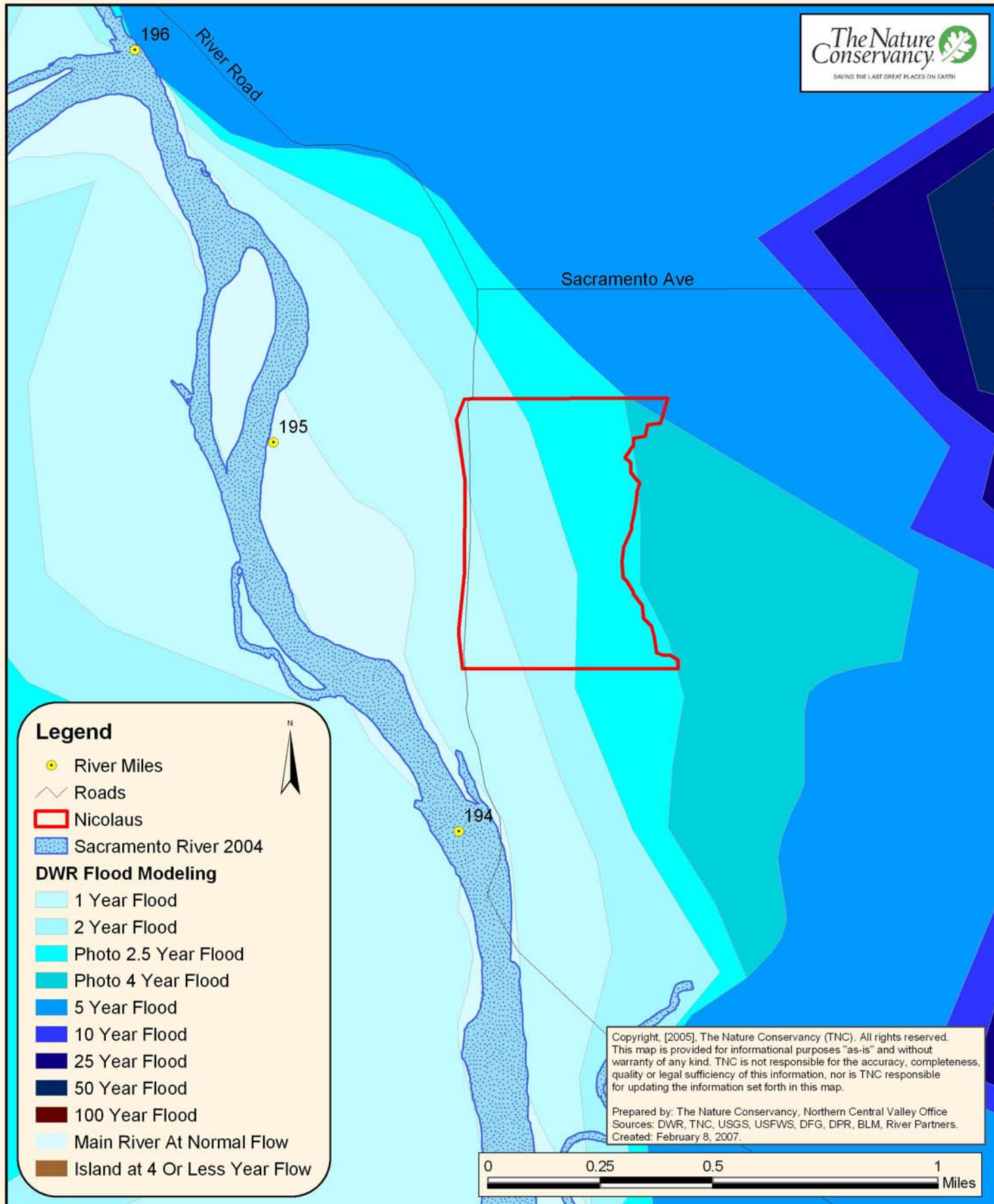
- Towns
- River Miles
- Roads
- Highways
- Sacramento River 2004
- Lands in Conservation**
- The Nature Conservancy
- TNC easement
- USFWS
- USFWS easement
- Dept of Fish and Game
- DFG easement
- Bureau of Land Mgmt
- Dept of Parks and Rec
- Dept of Water Resources
- USDA Forest Service
- River Partners
- Other

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Prepared by: The Nature Conservancy, Northern Central Valley Office
 Sources: DWR, TNC, USGS, USFWS, DFG, DPR, BLM, River Partners.
 Created: February 8, 2007.



Map 2. Nicolaus Modeled Flood Recurrence Intervals



Map 3. Nicolaus Restoration Communities



Legend

 Nicolaus

Restoration Community

-  Facilities Footprint (20.1 acres)
-  Grassland Buffer (8.9 acres)
-  Valley Oak Riparian Forest (36.1 acres)
-  Mixed Riparian Forest (15.0 acres)
-  Valley Oak Forest (34.5 acres)
-  Cottonwood Riparian Forest (19.4 acres)
-  Oak Savannah (6.5 acres)

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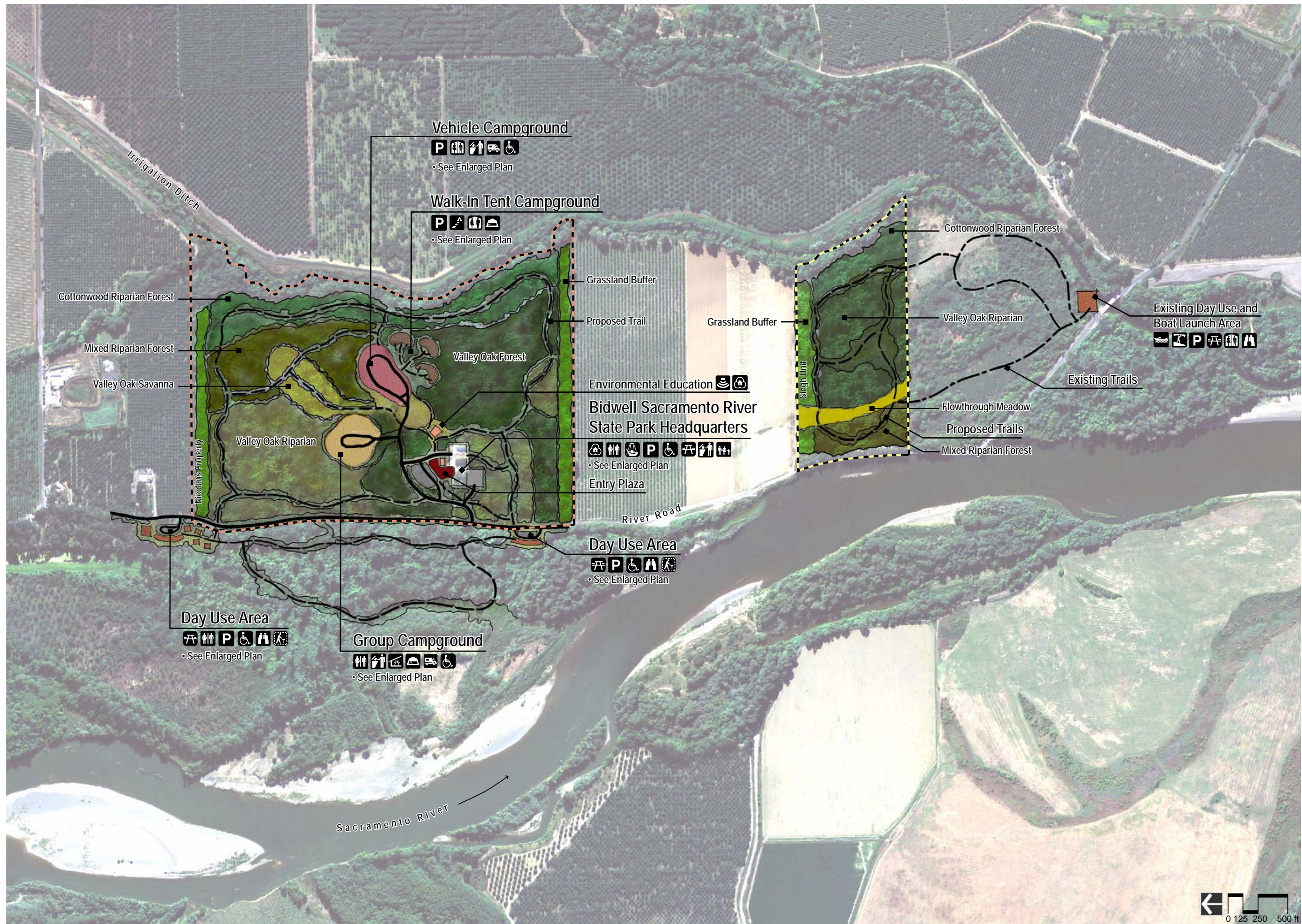
Prepared by Seth Paine, Conservation Information Manager, The Nature Conservancy, North Central Valley Office. Created: April 30, 2008.



APPENDIX D

Recreational Facilities Plan

**Singh & Nicolaus
Conceptual
Public Access
& Recreation Plan
Overall Concept Plan
August 2008**



Legend

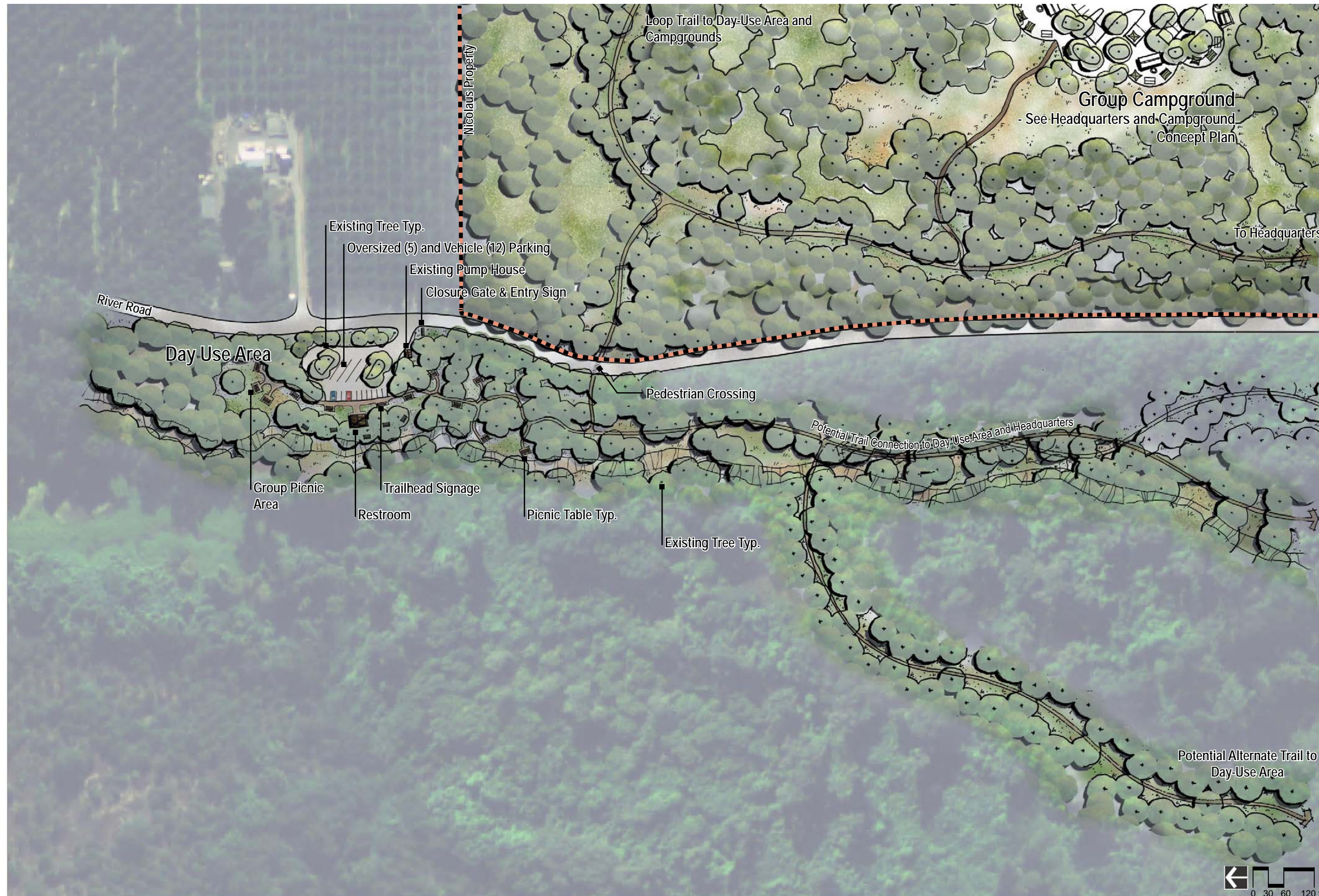
- Amphitheater
- Cartop Boat Access
- Vehicle Camping
- Walk-In Camping
- Picnic Area
- Restroom
- Showers
- Wildlife Viewing
- Accessible Facilities
- Interpretive Trails
- Vehicle Parking
- Environmental Education
- Dumpster
- Visitor Contact
- Picnic Shelter
- Tent Campground
- Grassland Buffer
- Valley Oak Savanna
- Valley Oak Riparian
- Cottonwood Riparian Forest
- Mixed Riparian Forest
- Valley Oak Forest
- Flowthrough Meadow
- Day Use Facilities
- Parking
- Existing Trail
- Proposed Trail
- Singh Boundary
- Nicolaus Boundary



**Singh & Nicolaus
Conceptual
Public Access
& Recreation Plan
Headquarters and
Campground
Concept Plan
August 2008**



**Singh & Nicolaus
Conceptual
Public Access
& Recreation Plan**
Day-Use Area
Concept Plan
August 2008



Development Summary

Location/Element	Recommendation/Description	Notes
Entry Plaza	<ul style="list-style-type: none"> • Pavement - ADA compliant, Aggregate Base Course with hardeners or Concrete • Planting Areas- Native Shrubs, Trees, and perennial plantings • Restroom/Shower Building - Pre-manufactured or site built building appropriate for flooding • Grade entire area to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> • Final grading to be determined during final plans and specifications.
Headquarters	<ul style="list-style-type: none"> • Pavement - Asphalt, concrete, or Aggregate Base Course w/ pavement markings • 10 - Oversized Vehicle (12' x 65') parking spaces • 15 - Standard Vehicle (10' x 20') parking spaces • Bus drop-off area • Grade entire area to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> • Concrete curb or wheel stops for all parking spaces. • Use existing developed area for office, contact station and maintenance. (see plans)
Day Use Area South	<ul style="list-style-type: none"> • Pavement - Asphalt, concrete, or Aggregate Base Course w/ pavement markings • 5 - Oversized Vehicle (12' x 65') parking spaces • 8 - Standard Vehicle (10' x 20') parking spaces • 1 - Accessible parking space • 3 - Picnic tables on Aggregate Base Course Pads • Informational Signage • Grade entire area to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> • Entry Signage and Closure Gates. • Trail Connections to Headquarters, North Day Use Area, and Campground. • Concrete curb or wheel stops for all parking spaces. • Final grading to be determined during final plans and specifications
Day Use Area North	<ul style="list-style-type: none"> • Pavement - Asphalt or Concrete w/ pavement markings • 10 - Standard Vehicle (10' x 20') parking spaces • 2 - Accessible Spaces • 7 - Picnic tables on ABC Pads • Group Picnic Area - 3 Picnic tables on Aggregate Base Course Pads • Informational Signage • Grade entire area to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> • Entry Signage and Closure Gates. • Trail Connections to Headquarters, South Day Use Area, and Campground. • Concrete curb or wheel stops for all parking spaces. • Final grading to be determined during final plans and specifications
Roads- Entry and Camp Loop	<ul style="list-style-type: none"> • Entry Road 24' width with 1' Aggregate Base Course shoulder • Camp Road one-way 16' width with 1' Aggregate Base Course shoulder • Pavement - Asphalt, or concrete, or Aggregate Base Course • Grade roads to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> • Closure gates for off-peak times and flooding. • Final grading to be determined during final plans and specifications
Trails	<ul style="list-style-type: none"> • 8' width • Pavement - ADA compliant; Aggregate Base Course, asphalt or concrete 	
Design Vehicle	<ul style="list-style-type: none"> • 42' length large vehicle plus additional vehicle(s) • 20' length trailer or boat • Assume total max. length = 65' 	

Development Summary

Location/Element	Recommendation/Description	Notes
Maintenance Area	<ul style="list-style-type: none"> • 24' width two-way asphalt, concrete, or Aggregate Base Course entry drive • Aggregate Base Course parking area, with hardeners • Security fencing - Chain link 6' height • Law Enforcement Parking - Aggregate base course, asphalt or concrete pavement • Grade area to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> • Entry Signage and Closure Gates. • Use 2 existing structures for storage and Maintenance Offices. • Final grading to be determined during final plans and specifications
Environmental Education/ Amphitheater	<ul style="list-style-type: none"> • Outdoor Amphitheater with 30'x15' (450 sq') open air structure • 3 - Accessible Parking Spaces with accessible Aggregate Base Course gravel trail leading to Amphitheater 	<ul style="list-style-type: none"> • Typical outdoor amphitheater - grass with wood or concrete benches
Tent Pads	<ul style="list-style-type: none"> • Pavement - Aggregate Base Course • Border Material-TBD • Grade tent pads to be 1' min. higher elevation for flooding purposes 	<ul style="list-style-type: none"> • Tent pads for various capacities to allow variety of camping and arrangements, 2% slope for drainage, with borders. • Border Material alternates include - concrete, stone, timber, logs, steel edging. • Idealology of rock or timber border, or composite borders as opposed to urban forms, other option is formed concrete.
Facility Pad	<ul style="list-style-type: none"> • Tent only sites - To accommodate 1 accessible picnic table, 1 fire ring, and 1 food storage locker • Grade facility pads to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> • Final grading to be determined during final plans and specifications
Accessibility Guidelines	<ul style="list-style-type: none"> • Americans with Disabilities Act Accessibility Guidelines (ADAAG) • California Division of the State Architect (DSA) Accessibility Standards 	
Spur Furnishings	<ul style="list-style-type: none"> • Food Storage Locker • Picnic Table - Accessible end, 8' length • Fire Ring and Grate • Barbecue Grill 	
Vehicle Back-In and Pull-Out Spurs	<ul style="list-style-type: none"> • Potable water - Jug Filler at restroom • Grade entire area to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> • Final grading to be determined during final plans and specifications
Potable Water	<ul style="list-style-type: none"> • Jug Filler with floor drain, at Shower Building and restrooms • Drinking Fountain, at Shower Building 	

Development Summary

Location/Element	Recommendation/Description	Notes
Shower Building	<ul style="list-style-type: none"> Restroom/Shower Building - Pre-manufactured or site built building Dish washing station and restroom facility part of structure Architectural character to be consistent throughout the State Park Grade entire area to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> Final grading to be determined during final plans and specifications
Group Campground	<ul style="list-style-type: none"> 6 - Vehicle Back-In Sites Group Tent Camping Pods Grade entire area to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> Final grading to be determined during final plans and specifications
Group Fire Ring	<ul style="list-style-type: none"> Large fire ring Log or bench style seating to accommodate 15-20 people 	
Group Picnic Shelters at Group Campground	<ul style="list-style-type: none"> 4 Pre-Manufactured Picnic Shelters - 44' x 22' (968 sq') Architectural character to be consistent throughout the State Park Grade picnic shelter area to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> Group fire ring at each shelter. Jug Filler at each shelter. Final grading to be determined during final plans and specifications
Restrooms	<ul style="list-style-type: none"> Pre-Manufactured vault toilets Architectural character to be consistent throughout the State Park Grade restroom pads to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> Final grading to be determined during final plans and specifications
Signage	<ul style="list-style-type: none"> Entry Signage - TBD Spur Markers Regulatory Signs - Property boundaries Informational Signage Interpretive Signage 	
Loop Entrance	<ul style="list-style-type: none"> Loop Identification Sign 	
Garbage Dumpsters	<ul style="list-style-type: none"> Animal proof dumpsters in enclosure Animal proof recycling bins Animal proof trash containers Grade dumpster pad to be 1' min. higher elevation for improved flood protection 	<ul style="list-style-type: none"> Location - Adjacent to Restrooms and Shower Building Final grading to be determined during final plans and specifications
Utilities	<ul style="list-style-type: none"> Underground any existing overhead electric and phone lines Upgrade existing or construct new septic system to meet local and state standards 	

APPENDIX E

Cultural Resources Inventory

Final
Cultural Resources Inventory and Assessment
Singh and Nicolaus Restoration and Public Access Project



Prepared for:
The Nature Conservancy

and

California Department of Parks and Recreation

March 2007

**Cultural Resources Inventory and Assessment
for the
Singh and Nicolaus Restoration and Public Access Project
Butte County, California**

Prepared for:

The Nature Conservancy
500 Main Street
Chico, CA 95928

Contact:

Ryan Luster, Program Manager
Restoration and Agriculture
530/897-6370

Prepared for:

California Department of Parks and Recreation
Archaeology, History and Museums Division,
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Prepared by:

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Richard W. Deis M.A., R.P.A.
916/414-5800

March 2007

MANAGEMENT SUMMARY

The Nature Conservancy (TNC), in collaboration with the California Department of Parks and Recreation (State Parks), is pursuing a habitat restoration and public access project (Singh and Nicolaus Project) along the Middle Sacramento River in and adjacent to Bidwell-Sacramento River State Park (Park), west of Chico in Butte County, California. The project involves two parcels: the Singh property is owned by State Parks and is within the Bidwell-Sacramento River State Park and the Nicolaus property is owned by TNC and is adjacent to the Park. The parcels are currently planted in walnut and almond trees and total approximately 190 acres. The project would involve the removal of the orchards and restoration of the parcels with native riparian vegetation to aid recovery of at-risk species, rehabilitate natural processes, protect and restore riparian habitat, and improve water quality. The project would include the acquisition of the Nicolaus parcel by State Parks from TNC. Upon completion of restoration of the Nicolaus property, the parcel would become part of the Bidwell-Sacramento River State Park. The restoration of both the Nicolaus and Singh parcels and inclusion in the Park would present an opportunity to enhance and expand the Park's recreational and public access opportunities. Therefore, concurrent with restoration activities, the project would include creation and expansion of public recreation facilities. New trails would be created on each site that would be aligned to connect with existing and proposed trails and facilities within the Park; new day and overnight recreation facilities would be constructed; and the Park headquarters would be relocated to the farm buildings on the Nicolaus parcel, which are on higher, less frequently flooded ground. Removal of the orchards and construction of facilities associated with this project would result in extensive ground disturbance within the proposed project area and the potential destruction or damage to historic and unique archaeological resources that may be present.

In compliance with the California Environmental Quality Act (CEQA) of 1970, as amended, an environmental document assessing the effects of the proposed restoration project is being prepared, with State Parks acting as the lead agency under CEQA. As part of the technical studies supporting the environmental document, State Parks and TNC have requested that EDAW conduct a review of pertinent background information, and perform a culture resource inventory and assessment for the proposed restoration project.

A record search conducted at the Northeast Information Center (NEIC), indicated that archaeological investigations have taken place adjacent to the proposed project sites, however no work has been conducted directly within the area slated for restoration and development. EDAW archaeologists conducted an inventory of the 190 acres on November 1, 2006, and on November 9, 2006. Field investigations resulted in the location of three widely dispersed prehistoric isolated artifacts in the southeastern corner of the Nicolaus property and the documentation of several structures that form a ranch complex on the Nicolaus property. These cultural resources were assessed for eligibility to the California Register of Historic Resources (CRHR). Because of a lack of association and data potential, none of the prehistoric artifacts are eligible for inclusion in the CRHR. Regarding the farm complex, archival research and an architectural assessment of the four historic-era buildings comprising the farm complex indicated that structures do not qualify for CRHR significance under all four criteria, either individually or as a group.

The area surrounding the Sacramento River was of considerable importance to Native American peoples as evidenced by the large number of prehistoric habitation sites, often containing human remains, several of which are in the vicinity of the project area. Therefore, because of the sensitivity and the high potential for the discovery of subsurface archaeological and human remains, particularly on an old alluvial terrace in the southeast corner of the Nicolaus property, and to meet the requests of the Mechoopda Indian Tribe of Chico, it is recommended that TNC arrange for the presence of a monitor to be present during ground disturbing activities associated with the removal of tree stumps on both the Nicolaus and Singh parcels. In addition, any ground disturbance (e.g., trenching, grading, or other excavation) required for the installation of facilities by State Parks should also be conducted with the presence of a monitor chosen by the Mechoopda Tribal organization.

Although survey methods were developed to identify resources that may be located on the project site, because of seasonal flooding episodes it is possible that presently unidentified subsurface cultural deposits are present in shallow subsurface contexts. Subsurface prehistoric resources may take the form of stone tool and tool fragments, rock concentrations, boulders, burned and/or unburned shell or bone, and/or darkened sediments containing some of the above-mentioned constituents. Historic period deposits include fragments of glass, ceramic, and metal objects, milled and split lumber, and structure and feature remains, such as building foundations and dumps.

Given the potential for subsurface deposits, it is recommended that agreements should be drafted with the Mechoopda Tribe of Chico outlining the protocols to be followed in the event of the discovery of subsurface archaeological deposits and mitigation to be carried out if the remains are determined to be significant. It is further recommended that these protocols state that all potentially destructive work in the vicinity of the find should cease until a qualified archaeologist can assess the significance of the find and, if appropriate, provide recommendations for treatment.

If human remains are found on the project site, the California Health and Safety Code requires that excavation be halted in the immediate area and the county coroner 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 on private or state lands (Health and Safety Code [HSC]. 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 (NAHC) by phone within 24 hours of making that determination (HSC 7050.5[c]).

The responsibilities of the NAHC for acting on notification of a discovery of Native American human remains are identified in the California Public Resources Code (PRC 5097.9). The NAHC is responsible for immediately notifying the person it believes is the Most Likely Descendant (MLD) of the Native American whose remains were found. With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. This should be done within 24 hours of their notification by the NAHC (PRC 5097.98[a]). If an agreement for treatment of the remains cannot be resolved satisfactorily, any of the parties may request mediation by the NAHC (PRC 5097.94[k]). Should mediation fail, the landowner or the landowner's representative must re-inter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC 5097.98[b]).

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A	Native American Consultation
B	Site Documentation

ACRONYMN AND ABBREVIATIONS

BP	before present
CEQA	California Environmental Quality Act
CRHR	California Register of Historic Resources
CRHR	California Register of Historical Resources
CSU	California State University
HSC	Health and Safety Code
MLD	Most Likely Descendant
NAHC	Native American Heritage Commission
NEIC	Northeast Information Center
Park	Bidwell-Sacramento River State Park
PRC	California Public Resources Code
Singh and Nicolaus Project	habitat restoration and public access project
SR	State Route
State Parks	California Department of Parks and Recreation
TNC	The Nature Conservancy
USGS	U.S. Geological Survey

INTRODUCTION

The Nature Conservancy (TNC), in collaboration with the California Department of Parks and Recreation (State Parks), is pursuing a habitat restoration and public access project (Singh and Nicolaus Project) along the Middle Sacramento River in and adjacent to Bidwell-Sacramento River State Park (Park), west of Chico in Butte County, California. The project involves two parcels: the Singh property is owned by State Parks and is within the Bidwell-Sacramento River State Park and the Nicolaus property is owned by TNC and is adjacent to the Park. The parcels are currently planted in walnut and almond trees and total approximately 190 acres. The project would involve the removal of the orchards and restoration of the parcels with native riparian vegetation to aid recovery of at-risk species, rehabilitate natural processes, protect and restore riparian habitat, and improve water quality. The project would include the acquisition of the Nicolaus parcel by State Parks from TNC. Upon completion of restoration of the Nicolaus property, the parcel would become part of the Bidwell-Sacramento River State Park. The restoration of both the Nicolaus and Singh parcels and inclusion in the Park would present an opportunity to enhance and expand the Park's recreational and public access opportunities. Therefore, concurrent with restoration activities, the project would include creation and expansion of public recreation facilities. New trails would be created on each site that would be aligned to connect with existing and proposed trails and facilities within the Park; new day and overnight recreation facilities would be constructed; and the Park headquarters would be relocated to the farm buildings on the Nicolaus parcel, which are on higher, less frequently flooded ground. Removal of the orchards and construction of facilities associated with this project would result in extensive ground disturbance within the proposed project area and the potential destruction or damage to historic and unique archaeological resources that may be present.

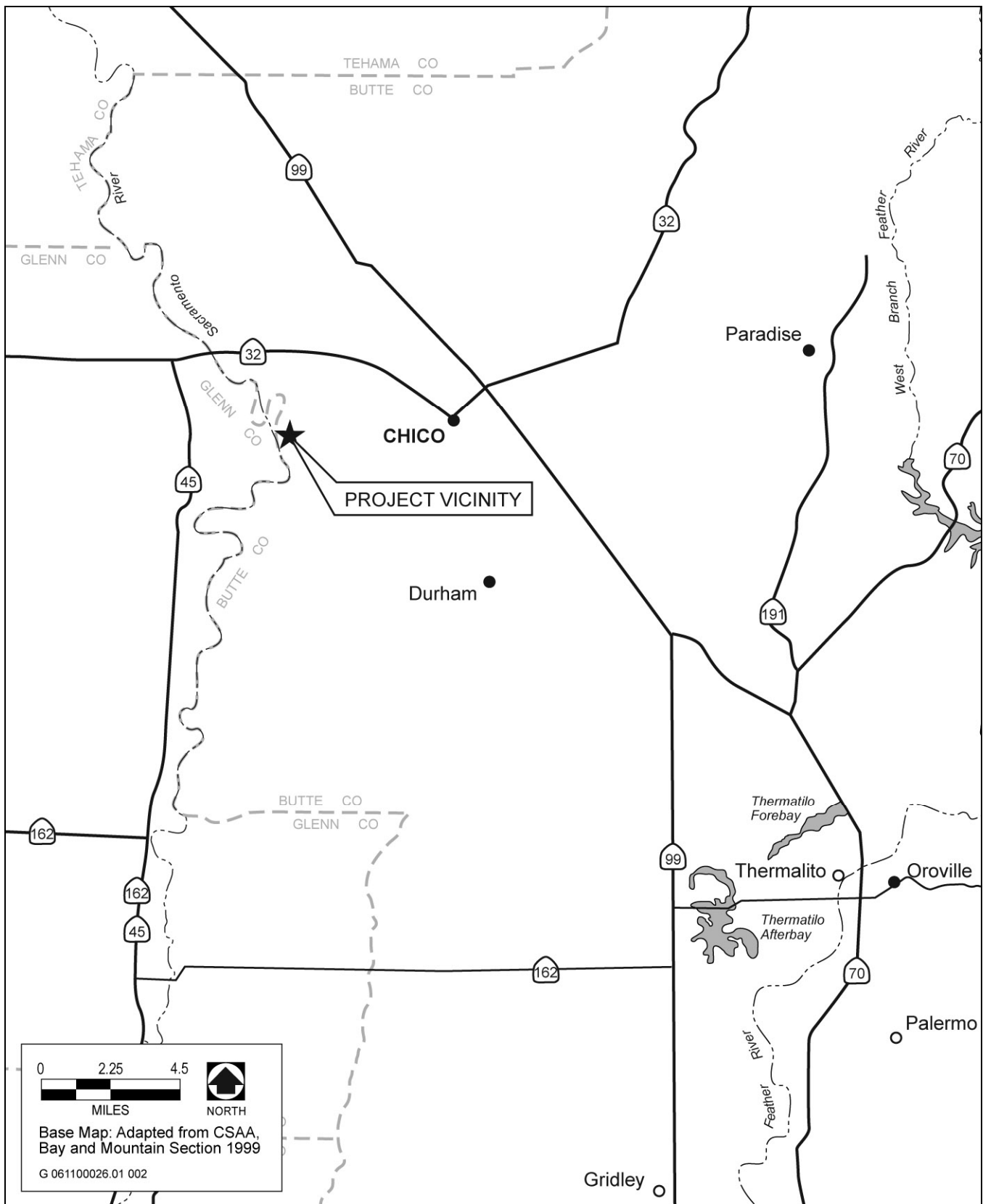
PROJECT LOCATION

The project site consists of the Singh and Nicholas parcels, located on the east bank of the Sacramento River, east of River Road, within Butte County approximately 12 miles west of the City of Chico. The Singh parcel is approximately one-half mile north of Big Chico Creek. The Singh parcel is bordered by Mud Creek to the east, Bidwell-Sacramento River State Park to the south, the Sacramento River to west, and private fallow farmland to the north. Of the 40 acres, approximately 34 acres is planted in walnuts up to 10 years in age. The Nicholas property is bordered by Mudd Creek to the east, private row crop farmland to the south, Bidwell-Sacramento River State Park to the west, and a private orchard to the north. Approximately 104 acres are planted in walnuts, and 32 acres are planted in almonds. These two parcels are depicted on the U.S. Geological Survey (USGS) Ord Ferry, California USGS 7.5 minute topographic map, within unsurveyed portions of Township 22 North, Range 1 West (Exhibits 1 and 2).

ARCHAEOLOGICAL STUDY TEAM

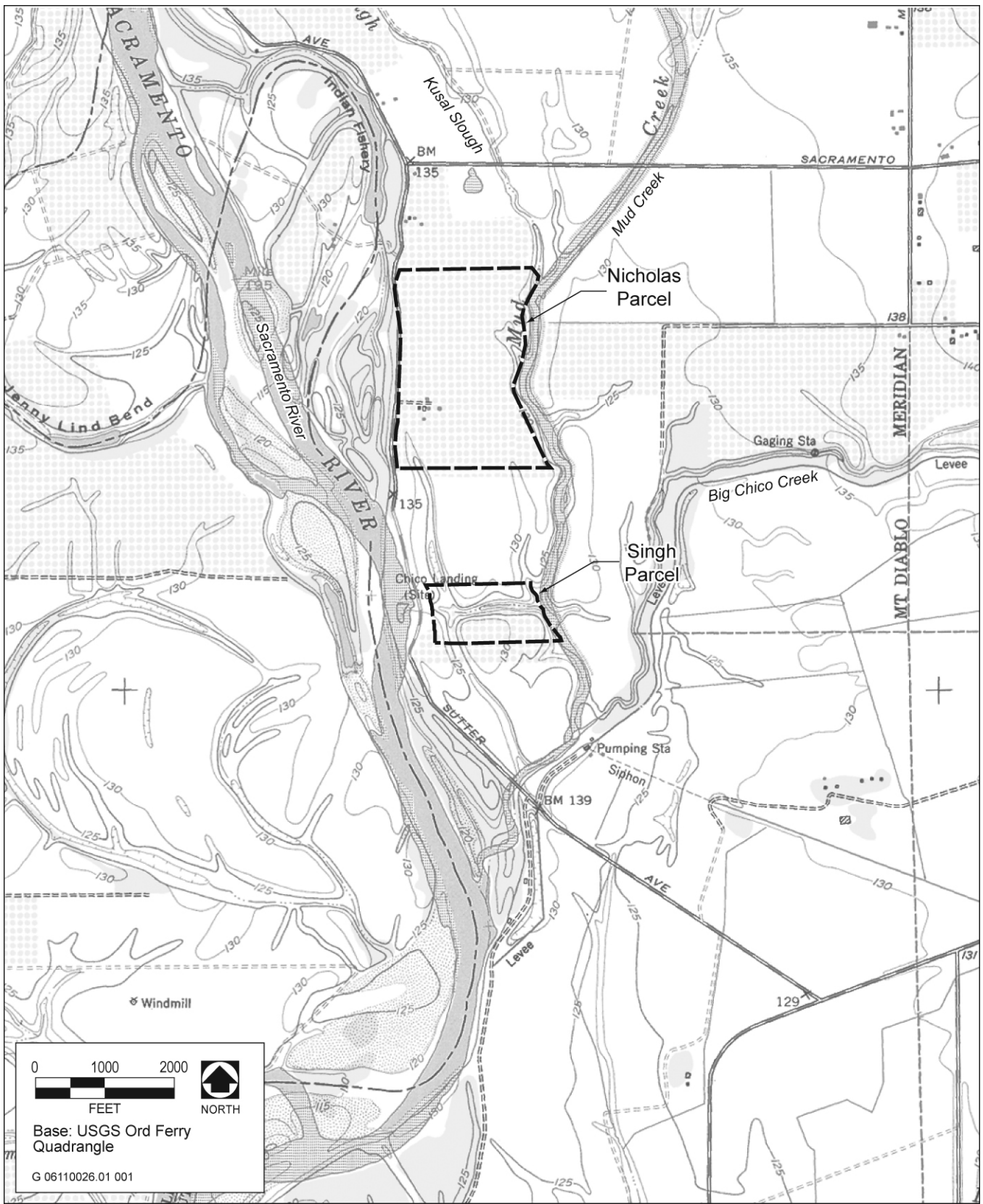
EDAW's cultural resources staff conducted research for this project according to current professional and legal standards. The study team consisted of professionally trained archaeologists and support staff. The following personnel were key participants in this research:

Person	Position
Richard Deis, M.A., R.P.A.	Project Archaeologist, Report Author
Brian Ludwig, PhD	Technical Review, Senior Archeologist
Angel Tomes, M.A.	Architectural Historian
Loren Huddleston, B.A.	Archaeologist
Lorrie Jo Williams	Graphic Artist
Amber Martin	Word Processor
Deborah Jew	Word Processor



Project Vicinity Map

Exhibit 1



Project Location Map

Exhibit 2

BACKGROUND

NATURAL SETTING

The project area and its vicinity have been occupied and used by diverse peoples for thousands of years. The varied natural setting and accessibility to other areas of the valley, the Sierra Nevada foothills, and the coastal regions have attracted a wide range of native and immigrant cultural groups. Evidence for prehistoric patterns of land use is located within the vicinity: however, the remains of major historic land-use along the Sacramento River appear, from the results of limited investigations, to have been obliterated by seasonal flooding and erosion along the west banks of the Sacramento River. Topography, vegetation, water sources, and the ease of waterway and overland transportation to a much wider geographic region make it likely that the area was heavily utilized throughout prehistoric and early historic times. However, seasonal flooding of the Sacramento River has deposited large amounts of silt on agricultural lands, which has resulted in the virtual capping of archaeological deposits particularly along the east bank of the river. Given such a landscape, it is almost certain that undocumented archaeological sites, features, and artifacts are present within the project site and the immediate vicinity. As such, encountering such resources during ongoing and future development needs to be addressed if these resources are to be preserved for future generations.

Patterns of historic-era and prehistoric land-use and activities within the project site and the surrounding area have been dictated to a great extent by the nature of the area's geomorphology and the biotic resources that are found in this unique and dynamic setting. The Sacramento River and its associated tributary creeks, while constituting a great attraction for settlement and resulting in the deposition of many cultural remains, has also affected those same sites through heavy erosion and the meandering of river and stream courses over centuries. Consequently, it is not possible to discuss the nature of cultural resources in the area without first examining the nature of the river system itself.

Three Sacramento Valley geomorphic regions (i.e., floodplains and natural levees, flood basins, and low alluvial plains and fans) are located within the project site and the immediate vicinity (see Bryan 1923; Hinds 1952: 145–157; Poland and Evenson 1966:239). Prior to the heavy gold mining operations of the 19th and 20th centuries and large-scale reclamation projects, several of the perennial and intermittent streams (e.g., Butte and Big Chico creeks) were prevented from flowing into the Sacramento River by natural levees that bordered the river. These water courses drained into the valley floor, eventually dispersing in tule marshlands bordering the main river or in the flood basins (Thompson 1961:299; Warner and Hendrix 1985:5.8–5.9 in Bayham and Johnson 1990:20). It was the rich and diverse floral and faunal species fostered by these marshland environments that attracted Native Americans.

Historic aerial photographs coupled with sediment analysis of the Sacramento River floodplain provide evidence of a dynamic system in a state of constant change. The area west of Pine Creek, and the west side of the Sacramento River opposite Mud and Big Chico creeks has seen numerous changes in the river channel over the last 120 years (Larsen et al. 2002:14–16). Some of these channel shifts resulted in prominent landforms that are visible today. Pine Creek Bend (Dunning Slough) in particular, can be seen changing and steadily migrating downstream throughout the late 1800s and well into the 20th century. Between 1870 and 1920, the Jenny Lind Bend, located between Pine and Big Chico Creeks, also migrated downstream and during the late 1800s the ever-shifting river channel formed the area known as the Indian Fishery to the west of the current project. Coupled with heavy historic mining and reclamation impacts to the river channel and the surrounding floodplain areas, the constant channel migrations of the Sacramento River and nearby creeks have likely obliterated many historic and prehistoric sites.

CULTURAL SETTING

To place the prehistoric and historic resources of the project area into a broader context, they need to be discussed within a larger cultural framework. The presence of a variety of natural resources, topography, and proximity to important transportation routes made the project area an ideal location for prehistoric and historic settlement. Consequently, although no sites, features or artifacts have been formally recorded within the project site, many such resources are likely to be encountered, although they may be buried under a foot or more of sediments.

PREHISTORIC ARCHAEOLOGICAL CONTEXT

Archaeological investigations in the general area have been somewhat limited, and while contributing a great deal to the body of knowledge of the prehistory of the region, there are many issues which are poorly understood. The first scientific studies relevant to the region occurred in 1907 when the University of California, Berkeley conducted reconnaissance projects in the Tehama and Red Bluff areas (Nelson 1907). Little else in the way of academic research was conducted until the 1950s when various large-scale water projects were constructed. The River Basin Survey resulted in a considerable body of research prior to the construction of a number of large water projects. One of the most important portions of this study included extensive inventories and excavations of prehistoric sites for the Oroville Dam (Treganza 1954). Treganza also conducted salvage excavations at prehistoric sites prior to the construction of the Redbank Reservoir in nearby Tehama County (Treganza 1954). Investigations by Chartkoff and Chartkoff (1983); at the Patrick Site (4-But-1), to the east of the current project, built upon the prehistoric cultural sequence developed for the Oroville vicinity first proposed by Olsen and Riddell (1963) (based in part of Treganza's 1953 work), which was further updated and expanded by Ritter (1970) and Kowta (1988).

Apart from the more broad-based findings of the work of Treganza, Chartkoff and Chartkoff, Riddell and Olsen, Ritter and Kowta, locally focused archaeological investigations have occurred in the immediate project vicinity. These include the excavations conducted by Bayham and Johnson (1990) at CA-Gle-105 on the west bank of the Sacramento River. The archaeological remains at this site were interpreted as those of a small summer camp occupied during the Early/Middle Horizon (ca. 3,000 years before present [BP]), and again following a hiatus around 2000–2500 BP. Deal (1987), reported on research on the site of CA-But-288, east of the Sacramento River and west of Pine Creek that revealed evidence for shifting subsistence strategies over time.

Along with numerous cultural resource management studies that have been performed in the general area, the results of these investigations constitute the bulk of what is known regarding early Native American cultural sequences in the region. However, while relatively little may be known about specific variations in early Native American subsistence, technological, and ritual practices, broad patterns of material culture have been documented over large geographic regions in California, including the area surrounding the current project.

The earliest well-documented entry and spread of humans into California occurred at the beginning of the Paleo-Indian Period (12,000–8000 BP). Social units are thought to have been small and highly mobile. Known sites have been identified within the contexts of ancient pluvial lake shores in the Great Basin and the Coastlines of California and are evidenced by such characteristic hunting implements as fluted projectile points and flaked stone crescent forms. Prehistoric adaptations over the ensuing centuries have been identified in the archaeological record by numerous researchers working in the area since the early 1900s, as summarized by Fredrickson (1974) Moratto (1984) and White (2003a).

Beardsley (1948) and Lillard, Heizer, and Fenenga (1939) and others conducted numerous studies that form the core of our early understanding of upper Central Valley archaeology. Little has been found archaeologically which dates to the Paleo-Indian or the subsequent Lower Archaic time periods (White 2003a:11–12). The lack of sites from these earlier periods may be due to high sedimentation rates, which have left the earliest sites deeply buried and inaccessible. However, archaeologists have recovered a great deal of data from sites occupied during

the Middle Archaic period (5000–3000 BP). During this time, the broad regional patterns of foraging subsistence strategies gave way to more intensive procurement practices. Subsistence economies were more diversified, possibly including the introduction of acorn processing technology. Human populations were growing and occupying more diverse settings. Permanent villages that were occupied throughout the year were established, and primarily located along major waterways.

The onset of status distinctions and other indicators of growing sociopolitical complexity mark the Upper Archaic Period (3000–1500 BP). Archaeological evidence suggests exchange systems became more complex and formalized and evidence of regular, sustained trade between groups was seen for the first time (White 2003a: Fig. 4).

Several technological and social changes characterized the Emergent Period (1500–150 BP) when the bow and arrow were introduced, ultimately replacing the dart and atlatl. Territorial boundaries between groups became well established and were recorded in early historic and ethnographic accounts. It became increasingly common that distinctions in an individual's social status could be linked to acquired wealth. Exchange of goods between groups became more regularized with more goods, including raw materials, entering into the exchange networks. In the latter portion of this period (500–200 BP), exchange relations became highly regularized and sophisticated. The clamshell disk bead became a monetary unit for exchange, and increasing quantities of goods moved greater distances just prior to large-scale European settlement of California (White 2003a:13–14).

ETHNOGRAPHIC CONTEXT

Ethnographically, the east bank of the Sacramento River was inhabited primarily by the Maidu (also referred to as the Konkow or the Mechoopda) who controlled extensive territory (Dreyer 1984:41, 43, White 2003a:21). The most extensive documentation of the Maidu was compiled by Dixon (1905), with other works by Hill (1978), Kroeber (1925, 1932), Riddell (1978), and Voegelin (1942).

The name Konkow, derived from the anglicized version of the native term *koyo-mkawi*, meaning “meadow land,” refers to peoples whose territory included sections of the Sacramento Valley floor and portions of the Sierra foothills east of the present-day cities of Chico and Oroville (White 2003a:21, Fig. 11). Formal delineations of the territory may have included prominent physiographic features and landforms although any certainty as to the early historic-period boundaries have been lost through decimation of the tribe resulting from disease and the removal of the people from their traditional lands during the 19th century. In general, such boundaries may not have been as hard and fast as reported in ethnographic accounts as extensive trail systems existed within the valley and foothill regions that connected the Konkow with other Maidu groups and tribes throughout northern and central California.

With a few notable exceptions, the lifeways of the Konkow differed little from their neighbors in the valley and in the Sierra foothills to the east. Probably the main difference, other than linguistic variation, occurred in the spiritual realm as the Konkow adhered to the ritual and belief systems associated with the *Kuksu* cult involving the impersonation of deity figures (White 2003a:21). Many other groups in the area did not practice these rituals, although the Nisenan and other non-Maiduan central California peoples did (Dixon 1905:322).

Konkow settlement conformed to a “village community” pattern that served as the only formal political structure of the tribe (Kroeber 1925:398). Village communities, which consisted of several closely spaced small settlements and a larger village containing a semi-subterranean earth-covered ceremonial lodge, were autonomous and self-sufficient units (White 2003a:21). Individual communities probably numbered around 200 inhabitants and “owned” or controlled specific territories in which hunting, gathering, and fishing areas were considered common property. The most politically influential man of each community lived in the central village. This head-man acted as an advisor and spokesman for his group although he possessed little in the way of concrete power. This individual was not selected by members of the village community nor was the position hereditary. Rather, the

head-man was chosen by the village shaman with the aid of various messenger spirits who could also remove him as they saw fit (Dixon 1905:223–224).

Konkow economic and subsistence patterns were largely based on a seasonal cycle that involved residence in winter village sites in the valley and summer journeys into the mountains for hunting. In the spring, various types of roots, stems, leaves, seeds, and fruits were gathered in large quantities to be dried for winter consumption (Dixon 1905:187). As with many Native American groups in California, the acorn, gathered from a variety of oak species, formed the staple food of the Konkow diet.

In general, Konkow and Maidu life remained unchanged for generations until a disease epidemic, possibly malaria, in 1833 decimated tribes throughout central California. During his expedition north along the Sacramento River in 1833 Work noted the decimation of villages which had been observed earlier in December of 1832 (Maloney 1943 and 1944). The Konkow population and cultural systems probably never fully recovered from the effects of the epidemic that was followed by the Gold Rush period starting in 1849. These two factors combined to thoroughly disrupt their social, spiritual, economic, and subsistence patterns to a point that the Konkow and Maidu were quickly reduced to a marginal existence in the region. Most illustrative of the impact these events had on the Konkow and the Nisenan neighbors are population estimates: in 1846, approximately 8,000 people from these groups were recorded. By 1910, that population had been reduced to less than 1,000 (Riddell 1978:386).

HISTORIC CONTEXT

A detailed overview of history pertinent to the area can be found in Hood and McGuire (1981). The historic context presented below, unless specified, summarizes this work, and includes additional information obtained from other historic accounts and documents.

The earliest documented European entry into the region around the project site occurred in 1808. That year, Gabriel Moraga led an expedition that eventually traveled up the Feather River and then proceeded north along the banks of the Sacramento River, possibly to the current location of Butte City. The purpose of Moraga's travels was largely to search for suitable locations for new missions and to further establish Spanish rule in the face of increasing foreign pressure, from the Russians in particular. Thirteen years would pass before another formal exploratory expedition into the region was launched. In 1821, Mexican governor Pablo Vicente de Sola sent Captain Luis Arguello with 55 soldiers to drive out reported American and Russian intruders from the areas north and east of San Francisco. Although Arguello's route is somewhat speculative, it appears he and his party may have eventually followed the Sacramento River north towards the general region located at the confluences of Mud and Big Chico Creeks (Beck and Haase 1974).

Hudson Bay trappers probably visited the project area during the early decades of the 19th century. One such expedition was led by John Work in 1832 and 1833 (Maloney 1943 and 1944), whose description of the area provides an excellent account of the area prior to Euro-American development. On his return trip north in August of 1833 he indicates that the weather was excessively hot with no wind. Two beaver and one elk were killed near the confluence of the Sacramento River and Chico Creek, and he indicates that they camped at a location which has subsequently been identified as Pine Creek (Maloney 1944:133 and 144). The next major exploratory or emigrant group to venture into the area was the Charles Wilkes expedition, led by Lieutenant George Emmons. This party led a group of emigrants into California from the Columbia River, passing south along the west bank of the Sacramento River in October of 1841. Lansford W. Hastings, (best known for his scouting of the "Hastings Cut-off" in Utah that eventually doomed the Donner Party) and Joseph B. Chiles, led an emigrant party into California, through the area in 1843. This was the same year that John Bidwell, who would have a dramatic impact on the area, first viewed the area surrounding Chico Creek.

The first in a series of events that shaped the economic and cultural landscape in the area occurred during the middle nineteenth century with the formation of Mexican land grants. In 1844 three such grants were issued and led to the establishment of several prominent ranchos. *Rancho de Farwell*, granted to Edward A. Farwell, was

located to the south of the current project; *Rancho Arroyo Chico*, which included the land now occupied by the Singh and Nicolas properties, was awarded to William Dickey; and Rancho Capay to the west of the project was granted to Josefa Sotao. John Bidwell, who had supervised some gold mining operations for William Dickey, purchased Rancho Arroyo Chico in 1849 and by 1852 had 200 to 300 acres under cultivation.

While wheat was the primary crop during the early agricultural period, it was slowly replaced with orchards between 1883 and 1900. The prominence of agriculture in the region and the profitability of large-scale operations were soon reflected in transportation improvements and innovations in the area that continued to be established well into the 20th century. One notable example of the mutually supporting industries can be seen in the operations of David Reavis, who acquired some 12,000 acres of the Farwell Grant and soon had over 7,000 acres sown in wheat in the 1870s. In part to aid in the transportation of goods to and from his property, he established Reavis Ferry, which crossed the Sacramento River just north of Chico Landing. Later river crossings included the Chico Free Bridge that was first erected in 1882. Flooding destroyed the bridge in 1889, but it was quickly rebuilt and subsequent replacements occurred in 1894, 1901, and 1913.

While various ferries and river crossings facilitated local commerce and transportation, the movement of the vast agricultural output of the region to market relied chiefly on river-borne, and eventually railroad transit. By the late 19th century, river navigation contributed to the viability of the vast rancho holdings, and it was during this time that Chico Landing situated near the confluence of Big Chico Creek and the Sacramento River became a substantial link in the shipment of agricultural products from the Bidwell and Richard J. Walsh ranches in particular. As competition to serve these and other large ranch and farm enterprises increased, the principal steamboat owners formed the California Steam Navigation Company in 1854, which basically controlled navigation on the river north of Sacramento. By 1913 the company was operating seven steamers and twenty-three barges, primarily between Chico Landing east of Chico, and San Francisco Bay (McGowan 1961:304–305).

Although railroads were being built in the Central Valley of California during the 1850s and 1860s, rail lines were not built into the vicinity of the project until the early 1870s, when the California and Oregon Railroad, (a subsidiary of the Central Pacific) was extend to Chico in July of 1870, providing a faster and more efficient means of bringing produce and cattle to market (White 2003a:50–51). As the area became more connected by rail to Sacramento, commercial river traffic soon decreased. One of the more notable lines in the area was the Northern Electric Rail, which connected Chico directly with Sacramento. This line ceased to exist as a separate company in 1921 when it was absorbed by the Southern Pacific Railroad, which still operates in the area today as the Union Pacific Railroad.

REGULATORY CONTEXT

Cultural resources in California are protected by a number of federal, state, and local regulations, statutes, and ordinances. Prior to approval of discretionary projects, potentially significant impacts of the project on unique archaeological resources and historical resources must be considered under CEQA (Public Resources Code Sections 21083.2 and 21084.1) and the State CEQA Guidelines (California Code of Regulations Title 14, Section 15064.5). The State CEQA Guidelines define a “historical resource” as “a resource listed or eligible for listing on the California Register of Historical Resources” (CRHR) (Public Resources Code §5024.1). A historical resource may be eligible for inclusion on the CRHR if it:

- ▶ is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; or
- ▶ is associated with the lives of persons important in our past; or
- ▶ embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

- ▶ has yielded, or may be likely to yield, information important in prehistory or history.

In addition, the State CEQA Guidelines (Section 15064.5) require consideration of “unique archaeological resource.” If an archaeological site does not meet the criteria for inclusion on the CRHR (which would qualify it as an historical resource), but does meet the definition of a unique archeological resource as outlined in the Public Resource Code (Section 21083.2), substantial adverse effects to it may be treated as a significant impact under CEQA. Mitigation treatment options under Public Resources Code Section 21083.2 for significant impacts to unique archaeological resources include a project that preserves such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a “unique archaeological resource”).

Section 15064.5(e) of the State CEQA Guidelines requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. State CEQA Guidelines Section 15064.5(d) directs the lead agency to consult with the appropriate Native Americans as identified by the NAHC and directs the lead agency (or applicant) to develop an agreement with the Native Americans for the treatment and disposition of the remains.

The State CEQA Guidelines Section 15064.5(b)(3) indicates that where significant impacts to an historical resource occurs, if a project follows the federal *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995), the impact shall generally be mitigated to a level of less than significant.

SIGNIFICANT RESOURCE VALUES

Numerous sources were contacted and consulted to gather information regarding the existing conditions and cultural resources that may be located within the project area. These included State Parks files and library resources located at the Chico District Office, the Resources Department in Sacramento, and the State Parks West Sacramento Library. A records search was conducted at the Northeast Information Center at California State University (CSU) Chico in February 2003, and updated with documents obtained in November 2006. Historic maps consisted of GLO plat maps, including *Sacramento Valley* 1844, *Rancho Capay* 1858, *Rancho Arroyo Chico* 1859, and historic Butte County maps dated 1886, 1894, 1901, and 1913.

A small number of cultural resource inventories have been conducted within the vicinity of the project, but have met with only limited success in identifying archaeological resources associated with the prehistoric and early historic eras. Archival research, however, indicates a rich historic relationship between early agriculture, and development within the region and sites, features, and artifacts associated with these periods and activities likely exist within the immediate vicinity.

Inventories conducted thus far have primarily been limited to those associated with transportation, reclamation, and recreation projects. These investigations are summarized in Table 1. The entire Irvine Finch River Access was inventoried by the Department of Transportation as part of an assessment for a proposed bridge replacement on State Route (SR) 32. Small portions of the Bidwell-Sacramento River State Park Indian Fishery, Pine Creek Landing, and Big Chico Creek subunits were inventoried for various projects (Jones and Stokes 1996, Hood and McGuire 1981, Johnson 1975). These investigations have located six prehistoric sites (CA-But-189, CA-But-191, CA-But-402, CA-But-717) and an historic water transmission facility (CA-But-1352) within one-mile of the project area.

As part of a large management plan, CSU Chico conducted surveys of approximately 7,100 acres along the Sacramento River, including 657 acres along the west side of the river opposite the Singh parcel. Within this

survey block no sites were discovered; however, five isolated finds, a trailer frame (P-11-625), two basket fish traps (P-11-625), a metasedimentary cobble core tool, a 20th-century building pad, and a piece of 19th-century glass were located (White 2003b).

**Table 1
Previous Cultural Resource Investigations Conducted Within
and Near the Project Site**

Report	Author / Date	NEIC No.
Cultural Resources Inventory Report for the M&T Ranch/Parrott Pumping Plant and Fish Screen Project, Butte County, California	Jones and Stokes (1996)	B-L-633
No Title	Manning (1983)	B-L-574
Archaeological Reconnaissance of 26 Erosion Sites along the Sacramento River, Chico Landing to Red Bluff, Butte, Glenn, and Tehama counties, California	Johnson (1975)	B-150
Bidwell River Park Project (Chico Landing)	Hood and McGuire (1981)	--
Archaeological Reconnaissance of the Bidwell River Park	Hetherington (1980)	--
Cultural Resource Study for the Bidwell-Sacramento River Restoration Project, Butte County, California	Atchley (2000)	
Cultural Resource Overview and Management Plan	White (2003b)	6867
Source: EDAW 2006		

NATIVE AMERICAN CONSULTATION

Project input was solicited from the NAHC, the Mechoopda Indian Tribe of Chico, and chairpersons with the Enterprise and Moortown Rancherias at Oroville. A review of the Sacred Land Files by the Native American Heritage Commission did not reveal the presence of sensitive resources within proposed project.

In a phone conversation between EDAW and Arlene Ward with the Mechoopda Indian Tribe of Chico, Arlene expressed concern for the potential presence of subsurface deposits. Arlene requested that a monitor affiliated with the Mechoopda Tribe be present during the removal of tree stumps and during any subsurface excavations associated with facilities development within the Nicolas and Singh parcels. Further, the Mechoopda would like to see protocols established for the treatment of archaeological deposits that may be discovered during monitoring, and mitigation procedures to be followed in the event that significant subsurface deposits are encountered. A copy of this correspondence is provided in Appendix A.

INVENTORY EXPECTATIONS

Historic data indicates that the course of the Sacramento River has changed dramatically since the middle and latter decades of the 19th century. Through time, the course of the river has moved slightly west from the current location of Chico Landing and Big Chico Creek Areas, suggesting that any remains of historic Chico Landing, Reavis Ferry, and Chico Free Bridge may be found slightly east of the current river channel, possibly at the southern end of the project area within the Singh parcel.

One site (CA-But-402) is located on the east side of Mud Creek, directly east of the Singh parcel. Topographic maps for the project area indicate that the eastern portion of the Singh and Nicolaus parcels is slightly higher in

elevation (approximately five feet). Given that prehistoric occupation primarily occurred on higher ground in the vicinity of the Sacramento River, the eastern portion of each parcel would appear to be slightly more sensitive than the remainder of the project sites. Historic maps indicate that one structure located on the Nicolaus property was constructed prior to 1949, and that three additional structures appear to have been erected between 1949 and 1964. This indicates that at least one, and possibly all four, structures may qualify for the CRHR.

RESULTS

Field investigations were conducted by EDAW cultural resources specialists on November 1 and 9, 2006. Surface visibility was partially (approximately 20%) obscured by grasses. Recent silt deposits from seasonal flooding of the Sacramento River were observed within the project area and were particularly deep along the western one-third of the Singh parcel where these deposits were found to be up to two feet in depth. Therefore, given the environmentally sensitive location adjacent to the Sacramento River and the obscured historic ground surface, there is a strong possibility of the presence of subsurface archaeological deposits. Archaeological resources observed during field investigations consisted of three widely dispersed prehistoric isolates in the southeastern corner of the Nicolaus parcel and four historic-era buildings located at the farm complex at 11896 River Road, also on the Nicolaus parcel. These resources are discussed below, their locations are depicted in Exhibit 3, and documentation is presented in Appendix B.

FARM COMPLEX (11896 RIVER ROAD)

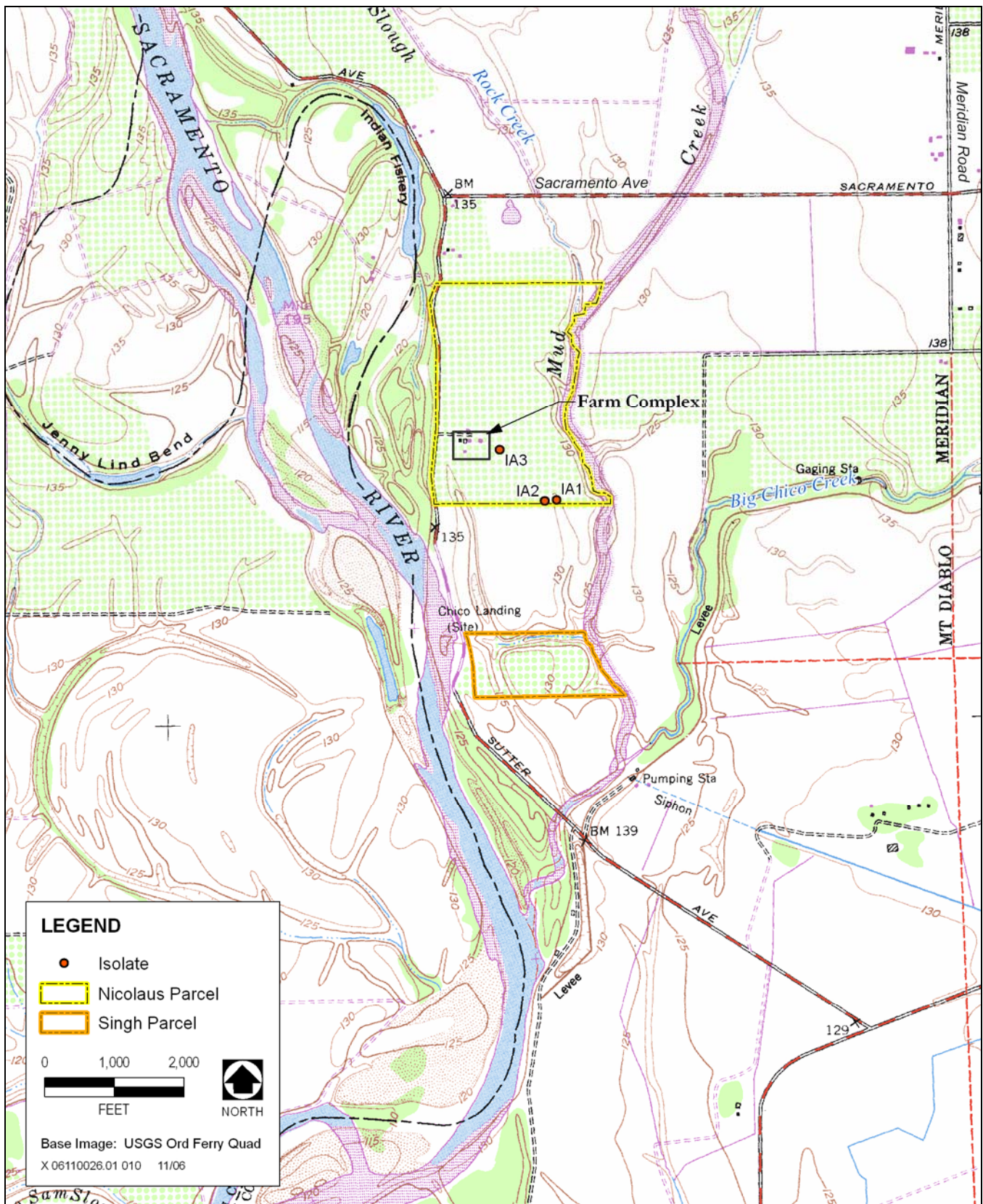
The buildings that comprise the agricultural complex on the Nicolaus parcel consist of a residence, two sheds, and a barn. The residence is a single-story wood-frame building with a clipped gable roof featuring composition tiles, closed eaves, and an internally-mounted chimney. The windows on this building are a combination of one-over-one sash and aluminum sliders. The exterior of this residence displays shingle siding, and two louvered vents on the northern elevation. Single-entry doors are located on the northern and eastern facades, and are accessed by concrete stairs. A screened porch is located on the western elevation. A wooden makeshift firewood covering/awning has been added to the northeastern façade. A two-story addition has been added to this building's southern elevation. This part of the building displays a gable roof and aluminum sliding windows. This building sits upon a concrete foundation.

Located east of the residence is a wood-framed equipment shed with a gable roof covered with corrugated metal and exposed rafter tails. A downspout is located on the northern elevation. The exterior features vertical wood siding and a combination of fixed and casement windows. The openings on this building include a wagon-way style door on the western façade, and two double-wide rolling doors on the northern and southern facades. The eastern elevation of this building features open woodwork with cross-bracing and wooden posts embedded in concrete piers. This building sits upon a concrete foundation.

East of this shed is a large equipment shed which features open truss-work, a corrugated metal-covered gable roof, and a doublewide corrugated metal rolling door on the southern façade. Farm equipment and vehicles are currently stored in this building.

The barn on this property displays a corrugated metal covered gable roof with a clerestory top straddling the ridge. Metal posts support the east side of the roof, and also support the railing that leads to an entryway on this façade. This concrete block building features corrugated metal in the gable ends and on the double-wide rolling doors on its northern and southern facades. A concrete ramp extends into the building's northern elevation. Although broken, the windows on this building appeared to have been fixed.

The buildings on the Nicolaus parcel display varying degrees of integrity. The residence has undergone the majority of modifications, including the replacement of most of the windows from sash to aluminum sliders, and a two-story addition on the southern façade. A wooden makeshift awning has also been added to this building's northern elevation. The remaining buildings retain integrity of design, materials, workmanship and setting. The Butte County Building Department did not require the filing of building permits prior to 1960; however, the overall style of the buildings indicates a 1950s construction date (Butte County 2006). This appears to be consistent with the USGS 7.5 minute Ord Ferry Quadrangle map which indicates that the residence was in place in 1949, and that the remaining three structures were added sometime between that date and 1969, when the map was photorevised.



Cultural Resources Locations

Exhibit 3

None of these buildings appear to meet the eligibility criteria for listing on the CRHR nor otherwise qualify as historical resources under CEQA. Research did not indicate that these buildings were associated with any events or persons considered important in local history (CRHR criteria 1 and 2). A review of historic topographic maps indicated that the property was one of many agricultural holdings in the area, several of which still exist. No information was found to indicate an important historic association of individuals or groups to the subject property.

The buildings do not embody any distinctive architectural characteristics, nor do they represent the work of a master (CRHR Criterion 3). The buildings are typical vernacular structures common to such property types of the mid-twentieth century. While buildings can sometimes serve as sources of important information about historic construction techniques and technologies (CRHR Criterion 4), these types of buildings are well represented locally and on a statewide level and within the Sacramento Valley, in both written and visual materials. Therefore, these buildings do not appear to be sources of important primary information.

ISOLATED FINDS

A total of three isolated artifacts were observed, consisting of one ground stone, and two flaked stone artifacts. Isolate IA1, is a vesicular volcanic ground stone fragment that exhibits polished facets on both sides. Overall measurements are 6.0 x 5.3 x 3.0 cm. Of the two flaked stone specimens, the first, IA2, is a basalt biface fragment that measures 5.2 x 3.0 x 1.5 cm. A flaked stone tool, IA3, has been produced from a cobble. The tool exhibits bifacial flaking on three margins, and measures 9.5 x 7.2 x 2.0 cm in size.

Because these artifacts lack association with other cultural constituents (e.g., artifacts, and occupation debris), they have limited potential to further contribute to an understanding of prehistory. Therefore, they do not qualify as unique archaeological resources, are recommended as not eligible for inclusion on the CRHR, and do not qualify as historical resources under CEQA.

MANAGEMENT RECOMMENDATIONS

Background research coupled with field observations indicates the presence of a historic farmstead consisting of four buildings and three isolated prehistoric artifacts on the project site. In addition, there is the potential for the presence of subsurface deposits particularly in the southeast corner of the Nicolaus parcel, where the three isolated finds are associated with a terrace consisting of older alluvium, which appears to be covered by a thin layer of finer silt deposits from recent flooding episodes.

Because of a lack of association and data potential, all three of the isolated artifacts are recommended not eligible for inclusion in the CRHR. Regarding the buildings at the farmstead, an association with events or persons of importance could not be established (criteria 1 and 2), and the buildings are typical vernacular structures that do not embody any distinctive architectural characteristics, nor do they represent the work of a master (Criterion 3). These types of buildings are well represented locally and on a statewide level and within the Sacramento Valley, in both written and visual materials. Therefore, they do not appear to be sources of important primary information (Criterion 4).

The area surrounding the Sacramento River was of considerable importance to Native American peoples as evidenced by the large number of prehistoric habitation sites, often containing human remains, several of which are in the vicinity of the project area. Therefore, because of the sensitivity and the high potential for the discovery of subsurface archaeological and human remains, particularly on the old alluvial terrace in the southeast corner of the Nicolaus property, and to meet the requests of the Mechoopda Indian Tribe of Chic, it is recommended that TNC arrange for a monitor to be present during ground disturbing activities associated with the removal of tree stumps on both the Nicolaus and Singh parcels. In addition, any ground disturbance (e.g., trenching, grading, or other excavation) required for the installation of facilities by the State Parks should also be conducted with the presence of a monitor chosen by the Mechoopda Tribal organization.

UNANTICIPATED FINDS

Although survey methods were developed to identify resources that may be located on the project site, because of seasonal flooding episodes it is possible that presently unidentified subsurface cultural deposits are present in shallow subsurface contexts. Subsurface prehistoric resources may take the form of stone tool and tool fragments, rock concentrations, boulders, burned and/or unburned shell or bone, and/or darkened sediments containing some of the above-mentioned constituents. Historic period deposits include fragments of glass, ceramic, and metal objects, milled and split lumber, and structure and feature remains, such as building foundations and dumps.

Given the potential for subsurface deposits, it is recommended that agreements should be drafted with the Mechoopda Tribe of Chico outlining the protocols to be followed in the event of the discovery of subsurface archaeological deposits and mitigation to be carried out if the remains are determined to be significant. It is further recommended that these protocols state that all potentially destructive work in the vicinity of the find should cease until a qualified archaeologist can assess the significance of the find and, if appropriate, provide recommendations for treatment.

In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the contractor and/or the project proponent shall immediately halt potentially damaging excavation in the area of the burial and notify the Nevada County Coroner and a professional archaeologist 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 on private or state lands (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 (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). Following the coroner's findings, the archaeologist, and the NAHC-designated Most Likely Descendent (MLD) 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 Butte County for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.9.

Implementation of Assembly Bill 2641, Statutes of 2006, requires that if the discovery of human remains is made after January 1, 2007 the following procedures will be implemented:

Upon the discovery of Native American remains, the procedures above regarding involvement of the County Coroner, notification of the NAHC, and identification of a MLD shall be followed. The landowner shall ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards or practices) is not damaged or disturbed by further development activity until consultation with the MLD has taken place. The MLD shall have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. AB 2641 suggests that the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. AB 2641(e) includes a list of site protection measures and states that the landowner shall comply with one or more of the following:

- (1) Record the site with the NAHC or the appropriate Information Center
- (2) Utilize an open-space or conservation zoning designation or easement
- (3) Record a document with the county in which the property is located

The landowner or their authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance if the NAHC is unable to identify a MLD or the MLD fails to make a recommendation within 48 hours after being granted access to the site. The landowner or their authorized representative may also re-inter the remains in a location not subject to further disturbance if they reject the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

REFERENCES

- Bayham, Frank E. and Keith L. Johnson. 1990. *Archeological Investigations at CA-GLE-105: A Multicomponent Site along the Sacramento River, Glenn County, California*. Prepared for U.S. Department of the Army Corps of Engineers, Sacramento District. By Archaeological Research Program, California State University, Chico.
- Beardsley, Richard K. 1948. Cultural Sequences in Central California Archaeology. *American Antiquity*. 14(1): 1–28.
- Beck, Warren, Ynez Haas. 1974. *Historical Atlas of California*. University of Oklahoma Press. Norman and London.
- Bryan, K. 1923. *Geology and Ground-Water Resources of Sacramento Valley, California*. U.S. Geological Survey Water-Supply Paper 495.
- Butte County. 2006. Personal communication between Butte County Assessors Office and Angel Tomes, architectural historian with EDAW, October 2006.
- Chartkoff, Joseph and Kerry Chartkoff. 1983. Excavations at the Patrick Site (4-Butte-1), in the Archaeology Two Northern California Sites, *Monograph 22, Institute of Archaeology*. University of California, Los Angeles.
- Deal, Krista C. 1987. *The Archaeology of the Cana Highway Site, CA-BUT-288, Butte County, California*. Masters Thesis on file at California State University, Chico.
- Dixon, R. 1905. The Northern Maidu. *Bulletin of the American Museum of Natural History* 17(3):119–346.
- Dreyer, William Ray. 1984. *Prehistoric Settlement Strategies in a Portion of the Northern Sacramento Valley, California*. Master Thesis on file at California State University, Chico.
- Fredrickson, David A. 1974. Cultural Diversity in Early Central California: A view from the North Coast Ranges. *Journal of California Anthropology* 1 (1):41–54.
- Hill, Dorothy. 1978. *The Indians of Chico Rancheria*. California Department of Parks and Recreation. Sacramento, CA.
- Hinds, N. E. A. 1952. *Evolution of the California Landscape*. California Division of Mines Bulletin 158.
- Hood, Joe D. and Pamela McGuire. 1981. *Bidwell River Park Project (Chico Landing), A Partial Inventory of Cultural Features* Cultural Heritage Planning Section, California State Department of Parks and Recreation.
- Johnson, Keith L. 1975. *Archaeological Reconnaissance of 26 Erosion Sites along the Sacramento River, Chico Landing to Red Bluff, Butte, Glenn, and Tehama Counties, California*.
- Jones & Stokes. 1996. *Cultural Resources Inventory Report for the M&T Ranch/Parrott Pumping Plant and Fish Screen Project, Butte County, California*.
- Kowta, Mark. 1988. *The Archaeology and Prehistory of Plumas and Butte Counties, California: An Introduction and Interpretive Model*. Northeast Information Center, California State University, Chico.
- Kroeber, A. L. 1925. Handbook of the Indians of California. *Bureau of American Ethnology Bulletin* 78. Washington DC.

- Kroeber, A. L. 1932. The Patwin and Their Neighbors. *University of California Publications in Archaeology and Ethnology* 29(4):253–423. Berkeley.
- Larsen, Eric, Emily Anderson, Ellen Avery, and Krishna Dole. 2002. *The controls on and evolution of channel morphology of the Sacramento River: A case study of River Miles 201–185*. Report to the Nature Conservancy. Geology Department, University of California, Davis.
- Lillard, J. B., R. F. Heizer, and F. Fenenga 1939. An Introduction to the Archaeology of Central California. Sacramento Junior College Department of Anthropology Bulletin 2, Sacramento.
- Maloney, Alice Bay editor. 1943. Fur Brigade to the Bonaventura: John Works's California Expedition of 1832–33 for the Hudson's Bay Company. *California Historical Society Quarterly* 22(3).
- . 1944. Fur Brigade to the Bonaventura: John Works's California Expedition of 1832–33 for the Hudson's Bay Company. *California Historical Society Quarterly* 23(1).
- McGowan, J. A. 1961. *History of the Sacramento Valley*. 3 vols. Lewis Hill Publishing Co. New York, N.Y.
- Moratto, Michael J. 1984. *California Archaeology*. Academic Press, Orlando.
- Nelson, N. C. 1907. Original Notes on Tehama-Red Bluff Mounds. Berkeley: University of California Archeological Survey Manuscripts #350.
- Olsen, William H., and Francis A. Riddell. 1963. The Archeology of the Western Pacific Railroad Relocation: Oroville Project, Butte County, California. *California State Department of Parks and Recreation, Archaeological Resources Section Report 7*, Sacramento.
- Poland, J. F. and R. E. Evenson. 1966. Hydrogeology and Land Subsidence, Great Central Valley, California. In *Geology of Northern California. California Division of Mines and Geology Bulletin 190*, edited by E. H. Bailey, pp. 239–247.
- Riddell, F. 1978. Maidu and Konkow. In *Handbook of North American Indians Volume 8: California*. Edited by R. F. Heizer, pp. 370–386. Smithsonian Institute, Washington D.C.
- Ritter, Eric W. 1970. Northern Sierra Foothill Archaeology: Culture History and Culture Process. In papers on California and Great Basin Prehistory, edited by E. W. Ritter, P. D. Schulz, and R. Kautz, pp. 171–184. *University of California Center for Archaeological Research Publications 2*. Davis.
- Thompson, Kenneth. 1961. Riparian Forest of the Sacramento Valley, California. *Annals of the Association of American Geographers* 51:294–315.
- Treganza, A. E. 1954. Salvage Archaeology in Nimbus and Redbank Reservoir Areas, California. University of California Archaeology Survey Reports 26:1–30). University of California, Berkeley.
- Voegelin, E. 1942. Culture Element Distributions, XX: Northeast California. *University of California Anthropological Records* 7(2):47–252.
- Warner, R. E. and K. M. Hendrix. 1985. *Riparian Resources of the Central Valley and California Desert*. California Department of Fish and Game. Sacramento, CA.
- White, Gregory G. 2003a. Final Report of Testing and Mitigation at Four Sites on the Level (3) Long Haul Fiber Optic Alignment, Colusa County, California. *Archaeological Research Program Report No. 42*. Archaeological Research Program, California State University, Chico.
- . 2003b. Cultural Resource Overview and Management Plan, Sacramento River Conservation Area, Tehama, butte, Glenn, and Colusa Counties, California, Prepared for the Nature Conservancy, Chico, CA.

APPENDIX A

Native American Consultation

EDAW Inc
2022 J Street, Sacramento, California 95814
T 916.414.5800 F 916.414.5850 www.edaw.com

October 25, 2006

Debbie Pilas-Treadway
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

RE: Bidwell-Sacramento Park Expansion

Dear Ms. Pilas-Treadway:

The Nature Conservancy (TNC), in collaboration with the California Department of Parks and Recreation (State Parks), is pursuing a habitat restoration and public access project along the Middle Sacramento River in and adjacent to Bidwell-Sacramento River State Park (Park), west of Chico in Butte County, California. EDAW is conducting cultural resources studies for the above-referenced Environmental Impact Report (EIR). The project is depicted on the attached portion of the Ord Ferry USGS quadrangle in the unsurveyed areas of Section 35 of Township 22N, Range 1 West.

A records search conducted with the Northeastern California Information Center, coupled with a review of ethnographic information indicates that the area is extremely sensitive, as indicated by the presence of numerous village locales and human internments located in the vicinity of the project. We would appreciate any information you can provide regarding prehistoric or ethnographic Native American land use. We are also interested in any contemporary Native American values that may be present near or within the project area, which potentially will need to be addressed in the EIR. We would also like to request a search of the NAHC Sacred Land files relevant to the project area.

Please send via mail or facsimile a listing of local Native American groups or representatives at your earliest convenience, so that we may contact appropriate individuals and account for their concerns in the planning process.

If you have any questions or comments feel free to contact me at my office. I can be reached by email at richard.deis@edaw.com, or by phone at 916-414-5878. I look forward to hearing from you soon.

Sincerely,



Richard W. Deis, M.A.,
Project Archaeologist

encl: Project location map

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov



October 27, 2006

Richard W. Deis, M.A.
Project Archaeologist
EDAW

Sent by Fax: 916-414-5850
Number of Pages: 3

Re: Proposed Bidwell-Sacramento Park Expansion, Butte County

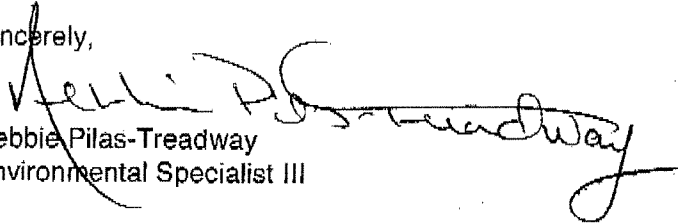
Dear Mr. Deis:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,


Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts

Butte County

October 27, 2006

Berry Creek Rancheria of Maidu Indians
Cultural Resources Rep
#5 Tyme Way
Oroville, CA 95966
gmix@berrycreekrancheria.
(530) 534-3859
(530) 534-1151 FAX

Tyme Maidu

*

Enterprise Rancheria of Maidu Indians
Glenda Nelson, Chairperson
1940 Feather River Blvd., Suite B
Oroville, CA 95965
eranch@cncnet.com
(530) 532-9214
(530) 532-1768 FAX

Maidu

Berry Creek Rancheria of Maidu Indians
Jim Edwards, Chairperson
#5 Tyme Way
Oroville, CA 95966
gmix@berrycreekrancheria.
(530) 534-3859
(530) 534-1151 FAX

Tyme Maidu

Greenville Rancheria of Maidu Indians
Lorie Jaimes, Chairperson
PO Box 279
Greenville, CA 95947
(530) 284-7990
(530) 284-6612 - Fax

Maidu

Butte Tribal Council
Ren Reynolds
1693 Mt. Ida Road
Oroville, CA 95966
(530) 589-1571

Maidu

Greenville Rancheria of Maidu Indians
Mike DeSpain, EPA/Cultural Resources
PO Box 279
Greenville, CA 95947
mdespain.
(530) 284-7990
Fax: (530) 284-6612

Maidu

Enterprise Rancheria of Maidu Indians
Frank Watson, Vice Chairperson
1940 Feather River Blvd., Suite B
Oroville, CA 95965
eranch@cncnet.com
(530) 532-9214
(530) 532-1768 FAX

Maidu

Greenville Rancheria of Maidu Indians
Gabriel Gorbet, Tribal Administrator
PO Box 279
Greenville, CA 95947
ggorbet@greenvillerrancheria.com
(530) 284-7990
Fax: (530) 284-6612

Maidu

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Bidwell-Sacramento Park Expansion, Butte County.

Native American Contacts

Butte County
October 27, 2006


KonKow Valley Band of Maidu
Patsy Seek, Chairperson
1706 Sweem Street
Oroville, CA 95965
(530) 533-1504
KonKow / Concow
Maidu

Mechoopda Indian Tribe of Chico Rancheria
Hygi Waetermans, Tribal Administrator
125 Mission Ranch Blvd
Chico, CA 95926
thouse@mechoopda-nsn.gov
(530) 899-8922 ext-209
Fax: (530) 899-8517
Mechoopda Maidu
Concow

Maidu Cultural and Development Group
Lorena Gorbet
PO Box 426
Greenville, CA 95947
(530) 284-1601
Maidu

Mechoopda Indian Tribe of Chico Rancheria
Rebekah Funes, Environmental Director
125 Mission Ranch Blvd
Chico, CA 95926
rfunes@mechoopda-nsn.gov
(530) 343-6614
Fax: (530) 343-6619
Mechoopda Maidu
Concow

Maidu Nation
Clara LeCompte
P.O Box 204
Susanville, CA 96130
(530) 257-9691
Maidu

 Mooretown Rancheria of Maidu Indians
Gary Archuleta, Chairperson
#1 Alverda Drive
Oroville, CA 95966
gwarchulet@mooretown.org
(530) 533-3625
(530) 533-3680 Fax
Maidu
KonKow / Concow

Mechoopda Indian Tribe of Chico Rancheria
Steve Santos, Chairperson
125 Mission Ranch Blvd
Chico, CA 95926
ssantos@mechoopda-nsn.gov
(530) 899-8922 ext 215
(530) 899-8517 - Fax
Mechoopda Maidu
Concow

Mooretown Rancheria of Maidu Indians
James Sanders, Tribal Administrator
#1 Alverda Drive
Oroville, CA 95966
(530) 533-3625
(530) 533-3680 FAX
Maidu
KonKow/Concow

This list is current only as of the date of this document.

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Bidwell-Sacramento Park Expansion, Butte County.

EDAW Inc
2022 J Street, Sacramento, California 95814
T 916.414.5800 F 916.414.5850 www.edaw.com

November 2, 2006

Rebekah Funes, Environmental Director
Mechoopda Indian Tribe of Chico Rancheria
125 Mission Ranch Blvd
Chico, CA 95926

Subject: Cultural Resource Investigations for the Restoration of the Sacramento River – Mud Creek Confluence

Dear Rebekah

The Nature Conservancy has retained EDAW, Inc., an environmental firm, to conduct cultural resource investigations for the proposed acquisition and restoration of approximately 186 acres directly east of the existing Bidwell-Sacramento River State Park. This location is along the east bank of the Sacramento River is near the confluence of Mud Creek and the Sacramento River (see attached map). The restoration project will involve the removal of existing almond and walnut orchards, and the possible expansion of trails from the Sacramento-River State Park. Results of this technical study will be incorporated into an environmental impact report, also being prepared by EDAW, Inc.

We would appreciate your help in identifying any concerns your community may have regarding the cultural resources in the study area. Please return the enclosed response form. Returning this form does not imply that you approve or disapprove of the study, nor does it limit your opportunity to comment at a later time.

Efforts to address your concerns will be included in the planning process. A list of Native American communities that are being contacted has been included. If there are any other groups or individuals you think should be contacted, please let us know.

In order to incorporate your concerns and/or input in any forthcoming reports, we would appreciate receiving your comments by November 30, 2006. If you have questions, please contact me at (916) 414-5878.

Sincerely,



Richard W. Deis, M.A.
Project Archaeologist

Enclosures: Map, Response form, Mailing list

EDAW Inc
2022 J Street, Sacramento, California 95814
T 916.414.5800 F 916.414.5850 www.edaw.com

November 2, 2006

Glenda Nelson, Chairperson
Enterprise Rancheria of Maidu Indians
1940 Feather River Blvd., suite 8
Oroville, CA 95965

Subject: Cultural Resource Investigations for the Restoration of the Sacramento River – Mud Creek Confluence

Dear Ms. Nelson

The Nature Conservancy has retained EDAW, Inc., an environmental firm, to conduct cultural resource investigations for the proposed acquisition and restoration of approximately 186 acres directly east of the existing Bidwell-Sacramento River State Park. This location is along the east bank of the Sacramento River near the confluence of Mud Creek and the Sacramento River (see attached map). The restoration project will involve the removal of existing almond and walnut orchards, and the possible expansion of trails from the Sacramento-River State Park. Results of this technical study will be incorporated into an environmental impact report, also being prepared by EDAW, Inc.

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In order to incorporate your concerns and/or input in any forthcoming reports, we would appreciate receiving your comments by November 30, 2006. If you have questions, please contact me at (916) 414-5878.

Sincerely,



Richard W. Deis, M.A.
Project Archaeologist

Enclosures: Map, Response form, Mailing list

EDAW Inc
2022 J Street, Sacramento, California 95814
T 916.414.5800 F 916.414.5850 www.edaw.com

November 2, 2006

Gary Archuleta, Chairperson
Mooretown Rancheria of Maidu Indians
#1 Alverda Drive
Oroville, CA 95966

Subject: Cultural Resource Investigations for the Restoration of the Sacramento River – Mud Creek Confluence

Dear Mr. Archuleta

The Nature Conservancy has retained EDAW, Inc., an environmental firm, to conduct cultural resource investigations for the proposed acquisition and restoration of approximately 186 acres directly east of the existing Bidwell-Sacramento River State Park. This location is along the east bank of the Sacramento River near the confluence of Mud Creek and the Sacramento River (see attached map). The restoration project will involve the removal of existing almond and walnut orchards, and the possible expansion of trails from the Sacramento-River State Park. Results of this technical study will be incorporated into an environmental impact report, also being prepared by EDAW, Inc.

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In order to incorporate your concerns and/or input in any forthcoming reports, we would appreciate receiving your comments by November 30, 2006. If you have questions, please contact me at (916) 414-5878.

Sincerely,



Richard W. Deis, M.A.
Project Archaeologist

Enclosures: Map, Response form, Mailing list

APPENDIX B

Site Documentation

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code

Reviewer

Date

*Resource Name or #: 11896 River Road

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted *a. County: Butte

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Ord Ferry Date: 1949: rev. 1969 T 22 N ; R 1 W ; 1/4 of 1/4 of Sec ; Mount Diablo B.M.

c. Address: 11896 River Road City: Chico Zip: 95973

d. UTM: Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

APN: 039-580-032-000

*P3a. Description: (Describe resource and major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The buildings that comprise this agricultural complex consist of a residence, two sheds, and a barn. The residence is a single-story wood-frame building with a clipped gable roof featuring composition tiles, closed eaves, and an internally-mounted fireplace. The windows on this building are a combination of one-over-one sash and aluminum sliders. The exterior of this residence displays shingle siding, and two louvered vents on the northern elevation. Single-entry doors are located on the northern and eastern facades. These doors are accessed by concrete stairs. A screened porch is located on the western elevation. A wooden makeshift firewood covering/awning has been added to the northeastern façade. A two-story addition has been added to this building's southern elevation. This part of the building displays a gable roof and aluminum sliding windows. This building sits upon a concrete foundation.

*P3b. Resource Attributes: (List attributes and codes)

HP33 – Farm / Orchard

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)

P5b. Description of Photo:
(View, date, accession #)
Photo 2450, Lkg SE

*P6. Date Constructed/Age and Sources: Historic Prehistoric Both
Early 20th cent. (1913-1949)

*P7. Owner and Address:
Nature Conservancy
201 Mission Street
San Francisco, CA 94105

*P8. Recorded by:
Tomes, A.
EDAW, Inc.
2022 J Street
Sacramento, CA 95814

*P9. Date Recorded:
11/1/06

*P10. Survey Type: (Describe)
Reconnaissance

*P11. Report Citation: None



- *Attachments: NONE Location Map Sketch Map Continuation Sheet
- Building, Structure/Object Record Archaeological Record District Record Linear Feature Record
- Milling Station Record Rock Art Record Artifact Record Photograph Record
- Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 5

*Resource Name or #: 11896 River Road

- B1. Historic Name: Unknown
- B2. Common Name: None
- B3. Original Use: Orchard
- B4. Present Use: Orchard

***B5. Architectural Style:**

Vernacular

***B6. Construction History:** (Construction date, alterations, and date of alterations)

Constructed 1950s

***B7. Moved?** No Yes Unknown **Date:** **Original Location:**

***B8. Related Features:**

Barn, Sheds

B9a. Architect: Unknown

B9b. Builder: Unknown

***B10. Significance:** Theme Farm Architecture

Area Chico

Period of Significance N/A

Property Type Orchard

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period and geographic scope. Also address integrity.)

The buildings on this property display varying degrees of integrity. The residence has undergone the majority of modifications, including the replacement of most of the windows from sash to aluminum sliders, and a two-story addition on the southern façade of the building. A wooden makeshift awning has also been added to this building's northern elevation. The remaining buildings retain a fair degree of integrity. The Butte County Building Department did not require the filing of building permits prior to 1960, however the overall style of the buildings indicate early to mid twentieth century construction dates (Pers. Comm. Butte County 2006). (See Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

- Ord Ferry USGS 7.5 minute topographic map (1950; 1969)
- Chico Landing USGS 7.5 minute topographic map (1912)
- Butte County Building Department
- Butte County City Directories (1920s – 1985)
- Office Map of Butte County (1920; 1940)
- History of Sutter and Yuba Counties, Delay, P. 1924

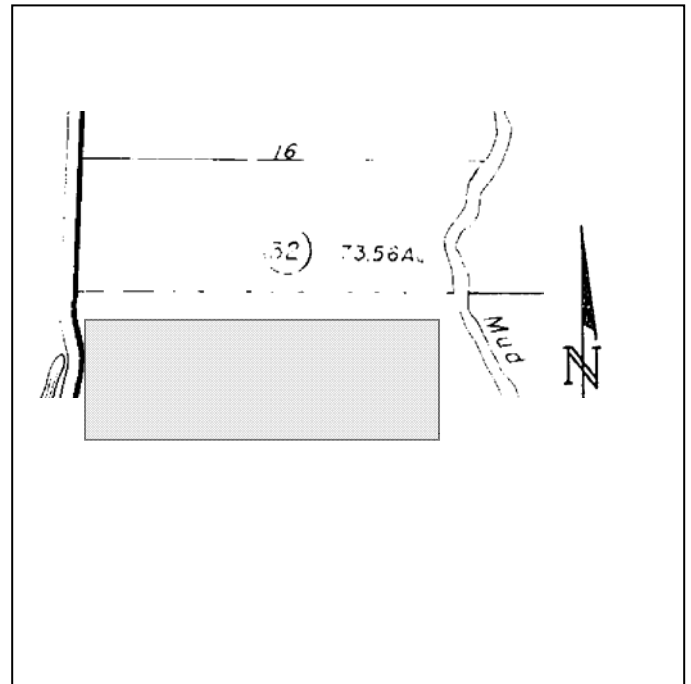
B13. Remarks:

***B14. Evaluator:**

Tomes, A.

***Date of Evaluation:**

11/1/06



*Recorded by: Tomes, A.

*Date: Continuation Update

Affiliation: EDAW, 2022 J Street, Sacramento, CA

P3a (Description) continued:

Located east of the residence is a wood-framed shed with a gable roof covered with corrugated metal and exposed rafter tails. A downspout is located on the northern elevation. The exterior features vertical wood siding and a combination of fixed and casement windows. The openings on this building include a wagon-way style door on the western façade, and two double-wide rolling doors on the northern and southern facades. The eastern elevation of this building features open woodwork with cross-bracing and wooden posts embedded in concrete piers. This building sits upon a concrete foundation.

East of this shed is a gear shed which features open truss-work, a corrugated metal-covered gable roof, and a doublewide corrugated metal rolling door on the southern façade. Farm equipment and vehicles are stored in this building.

The barn on this property displays a corrugated metal covered gable roof with a clerestory top straddling the ridge. Metal posts support the east side of the roof, and also support the railing that leads to an entryway on this façade. This concrete block building features corrugated metal in the gable ends and on the double-wide rolling doors on its northern and southern facades. A concrete ramp extends into the building's northern elevation. The windows on this building are broken, but appeared to have been fixed.

B10 (Significance) continued:

None of these buildings appear to meet the eligibility criteria for listing on the California Register of Historical Resources (CRHR). Research did not indicate that these buildings were associated with any events or persons considered important in local history (CRHR criteria 1 and 2). The earliest topographic map found depicting the project area (1912) does not show the subject property, however there are a few houses depicted approximately ¼ mile south of the parcel (Chico Landing Topographic Map 1912). Sometime after 1912 the topographic map name depicting the project area changed to Ord Ferry, the earliest of which found was for 1950. The subject property is depicted on the 1950 map consisting of one residence and one outbuilding. These buildings therefore were constructed sometime between 1913 and 1949. By 1969, four more outbuildings were depicted, as indicated by the photo-revision undertaken that year. The review of historic topographic maps indicated that the property was but one of many agricultural holdings in the area during the early to mid twentieth century, several of which still exist. No information was found to indicate an important association to the subject property. A review of historic City Directories for Butte County (1920s – 1950s) did not reveal the presence of the subject address, a common occurrence for rural properties. The 1920 Official Map of Butte County depicts the Gianella Land Company as owner of the subject property, as well as several surrounding parcels at that time. A Gianella family, immigrants from Switzerland, were recorded as settling in Yuba County as farmers in the late nineteenth century (Delay 1924), however no substantive information was found for the Gianella Land Company.

The buildings themselves do not embody any distinctive architectural characteristics, nor do they represent the work of a master (CRHR Criterion 3). Because Butte County does not possess building permits prior to the year 1961, the only permits on file for the subject property are for more recent modifications, including internal electrical (1978), and the addition of a mobile home on the property (1992). The buildings on the property are typical vernacular structures common to such property types of the early to mid-twentieth century. While buildings can sometimes serve as sources of important information about historic construction techniques and technologies (CRHR Criterion 4), these types of buildings are well represented locally and on a statewide level, in both written and visual materials. Furthermore, the historic-era buildings on this property, particularly the residence, have undergone several modifications which have affected their historic integrity. These buildings do not appear to be sources of important primary information.

***Recorded by:** Tomes, A.

***Date:** Continuation Update

Affiliation: EDAW, 2022 J Street, Sacramento, CA



Shed 1



Barn



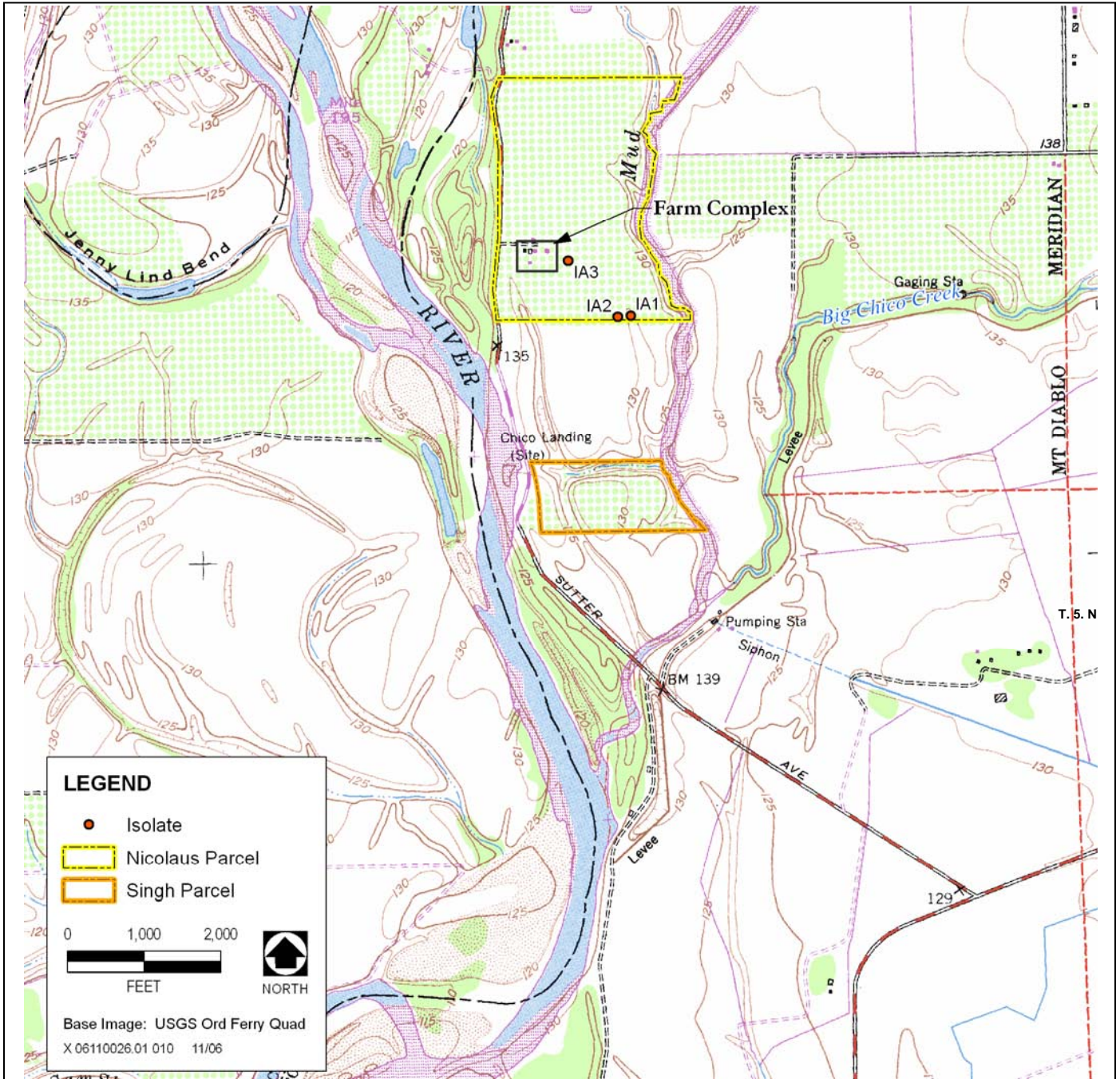
Equipment Shed

State of California C The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

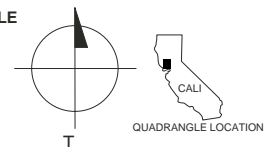
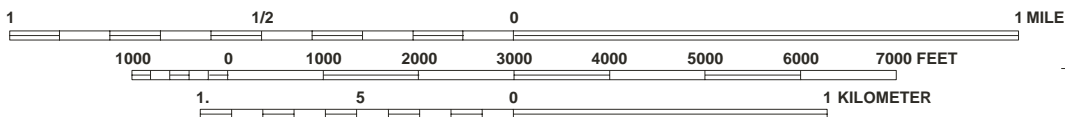
Primary # _____
 HRI # _____
 Trinomial _____

Page 5 of 5 *Resource Name or # (Assigned by recorder) 11896 River Road

*Map Name: USGS Ord Ferry Quad Scale: 1:24,000 *Date of Map: 1969



Source: USGS Ord Ferry Quad 1949 (photo revised 1969) -- Contour Interval 40 Feet



PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code

Reviewer

Date

*Resource Name or #: IA1

P1. Other Identifier:

P2. Location: Not for Publication Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*a. County: Butte County

b. USGS 7.5' Quad: Date:
Ord Ferry, Calif 1949 Photorevised
1969

T 22N ; R 1W ; ¼ of ¼ of Sec Not projected ; Mount Diablo B.M.

c. Address: City: Zip:

d. UTM: Zone 10S ; 590999 mE/ 4396683 mN

e. Other Locational Data: This isolate is located within a walnut orchard east of River Road on property currently owned by The Nature Conservancy.

P3a. Description: This isolated artifact is a vesicular volcanic ground stone fragment that exhibits polished facets on both sides. Overall measurements are 6.0 x 5.3 x 3.0 cm.

P3b. Resource Attributes: AP16

P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)

P5b. Description of Photo:

P6. Date Constructed/Age and Sources: Historic Prehistoric Both

P7. Owner and Address:
The Nature Conservancy
Chico, CA

P8. Recorded by:
Richard W. Deis
EDAW, Inc.
2022 J Street
Sacramento, CA 95814

P9. Date Recorded:
11-1-06

P10. Survey Type: Intensive survey

P11. Report Citation: Cultural Inventory and Assessment for the Mud Creek-Sacramento River Restoration Project



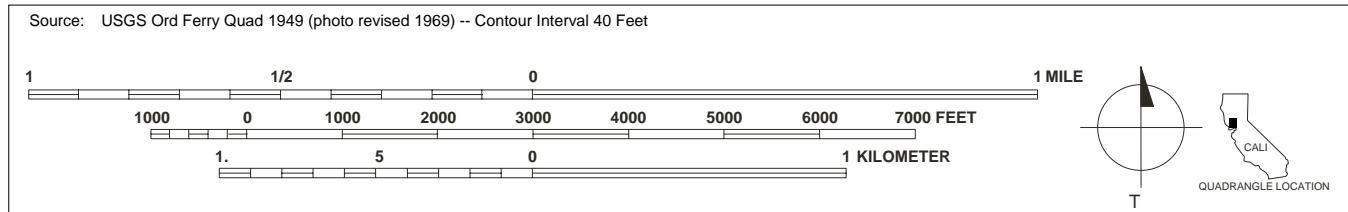
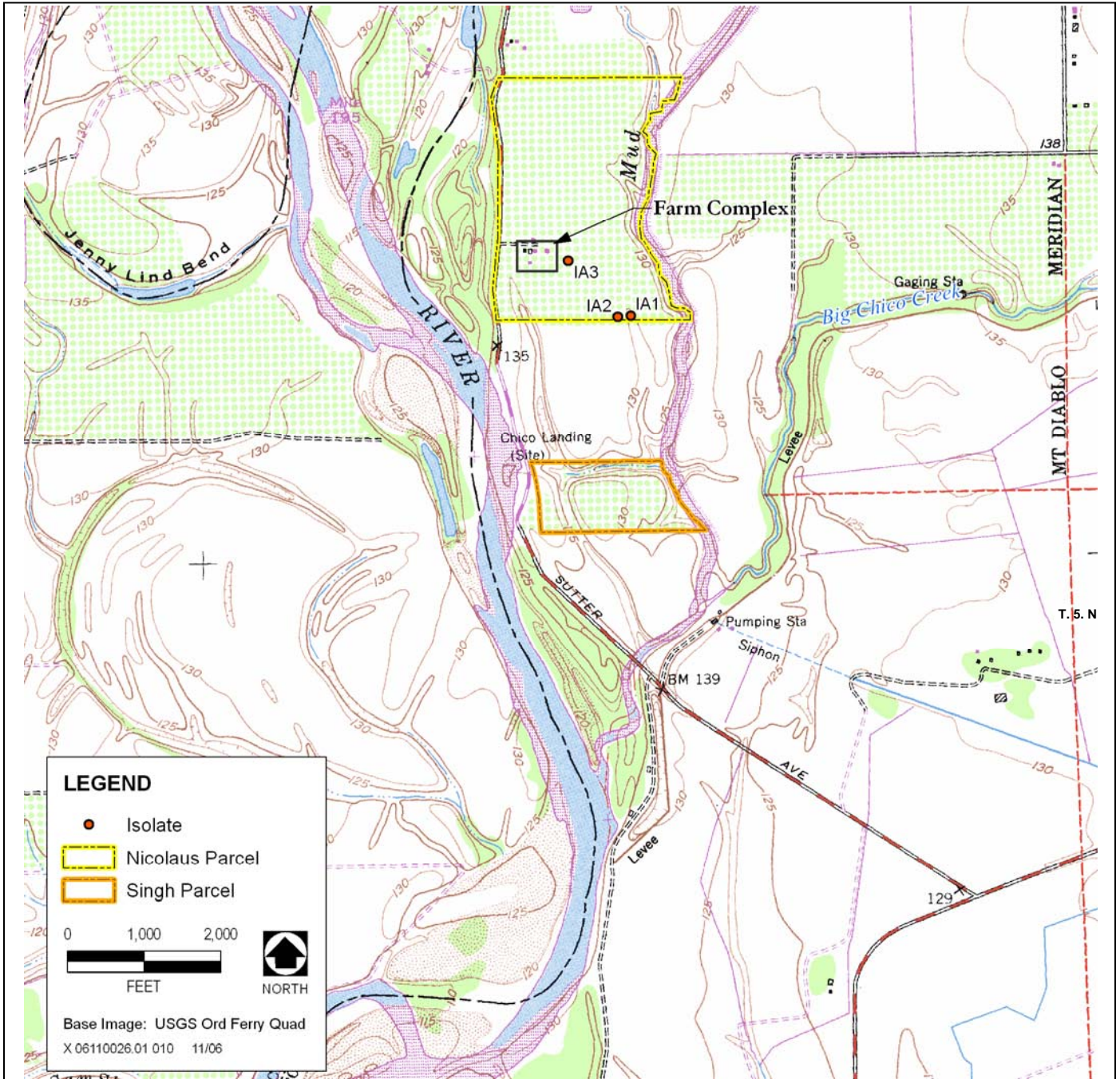
- *Attachments: NONE Location Map Sketch Map Continuation Sheet
- Building, Structure/Object Record Archaeological Record District Record Linear Feature Record
- Milling Station Record Rock Art Record Artifact Record Photograph Record
- Other (List):

State of California C The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
 HRI # _____
 Trinomial _____

Page 2 of 2 *Resource Name or # (Assigned by recorder) IA1

*Map Name: USGS Ord Ferry Quad Scale: 1:24,000 *Date of Map: 1969



PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code

Reviewer

Date

*Resource Name or #: IA2

P1. Other Identifier:

P2. Location: Not for Publication Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*a. County: Butte County

b. USGS 7.5' Quad: Date:
Ord Ferry, Calif 1949 Photorevised
1969

T 22N ; R 1W ; ¼ of ¼ of Sec Not projected ; Mount Diablo B.M.

c. Address: City: Zip:

d. UTM: Zone 10S ; 590948 mE/ 4396680 mN

e. Other Locational Data: This isolate is located within a walnut orchard east of River Road on property currently owned by The Nature Conservancy.

P3a. Description: This isolated find is a basalt biface fragment that measures 5.2 x 3.0 x 1.5 cm.

P3b. Resource Attributes: AP16

P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)

P5b. Description of Photo:

View of biface fragment

P6. Date Constructed/Age and

Sources: Historic
 Prehistoric Both

P7. Owner and Address:

P8. Recorded by:

Richard W. Deis
EDAW, Inc.
2022 J Street
Sacramento, CA 95814

P9. Date Recorded:

11-1-06

P10. Survey Type: Intensive survey

P11. Report Citation: Cultural Inventory and Assessment for the Mud Creek-Sacramento River Restoration Project



*Attachments: NONE

Building, Structure/Object Record

Milling Station Record

Other (List):

Location Map

Archaeological Record

Rock Art Record

Sketch Map

District Record

Artifact Record

Continuation Sheet

Linear Feature Record

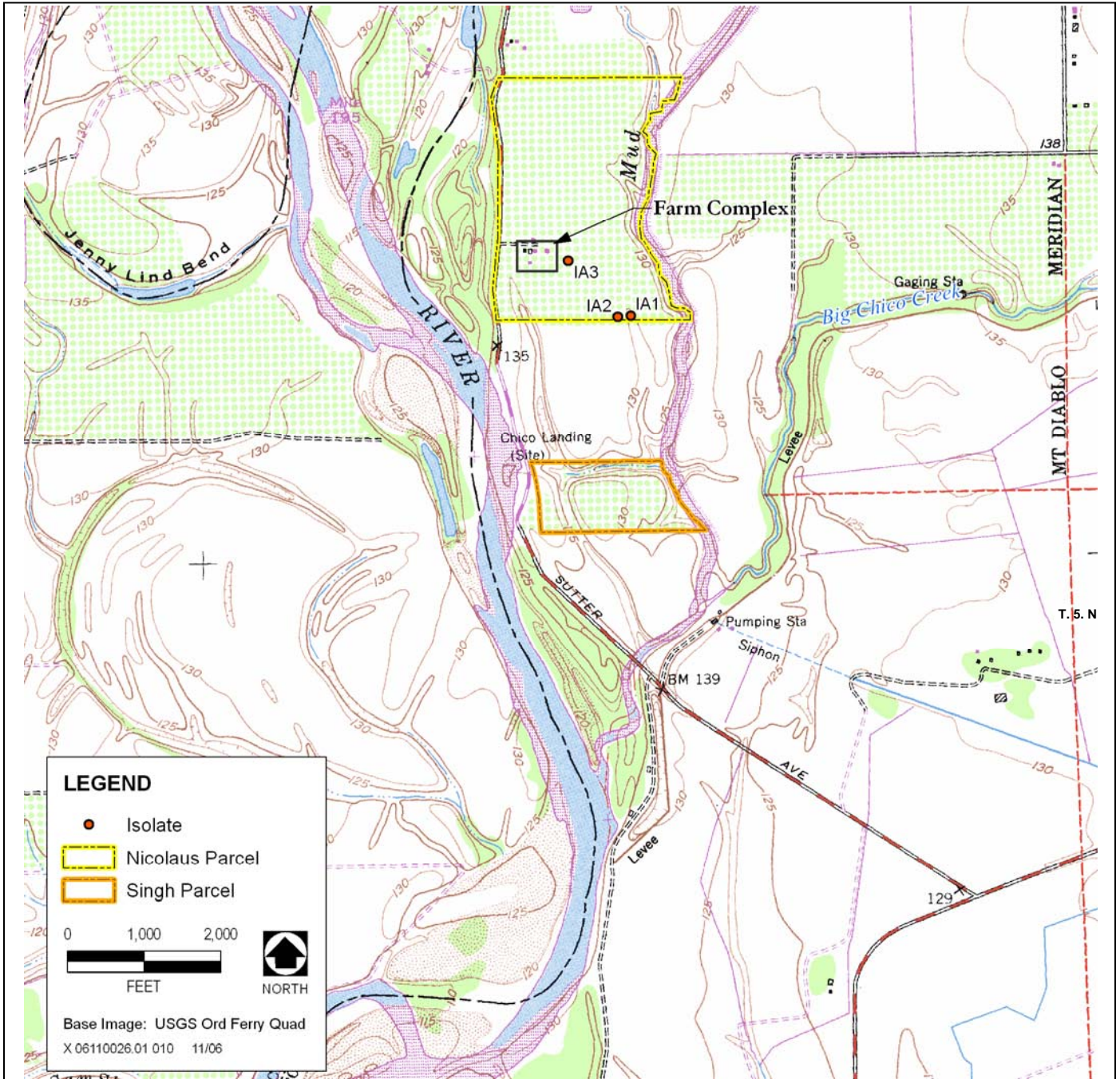
Photograph Record

State of California C The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

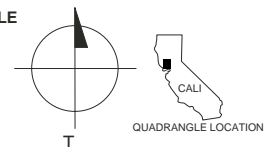
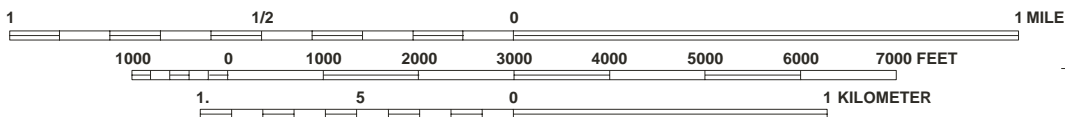
Primary # _____
 HRI # _____
 Trinomial _____

Page 2 of 2 *Resource Name or # (Assigned by recorder) IA2

*Map Name: USGS Ord Ferry Quad Scale: 1:24,000 *Date of Map: 1969



Source: USGS Ord Ferry Quad 1949 (photo revised 1969) -- Contour Interval 40 Feet



PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code

Reviewer

Date

*Resource Name or #: IA3

P1. Other Identifier:

P2. Location: Not for Publication Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*a. County: Butte County

b. USGS 7.5' Quad: Date:
Ord Ferry, Calif 1949 Photorevised
1969

T 22N ; R 1W ; 1/4 of 1/4 of Sec Not projected ; Mount Diablo B.M.

c. Address: City: Zip:

d. UTM: Zone 10S ; 590750 mE/ 4396903 mN

e. Other Locational Data: This isolate is located within a walnut orchard east of River Road. The property is currently owned by The Nature Conservancy.

P3a. Description: This flaked stone tool has been produced from a cobble. It exhibits bifacial flaking on three margins, and measures 9.5 x 7.2 x 2.0 cm in size.

P3b. Resource Attributes: AP16

P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)



P5b. Description of Photo:

P6. Date Constructed/Age and Sources: Historic Prehistoric Both

P7. Owner and Address:
The Nature Conservancy
Chico, CA

P8. Recorded by:
Richard W. Deis
EDAW, Inc.
2022 J Street
Sacramento, CA 95814

P9. Date Recorded:
11-1-06

P10. Survey Type: Intensive survey

P11. Report Citation: Cultural Inventory and Assessment for the Mud Creek-Sacramento River Restoration Project

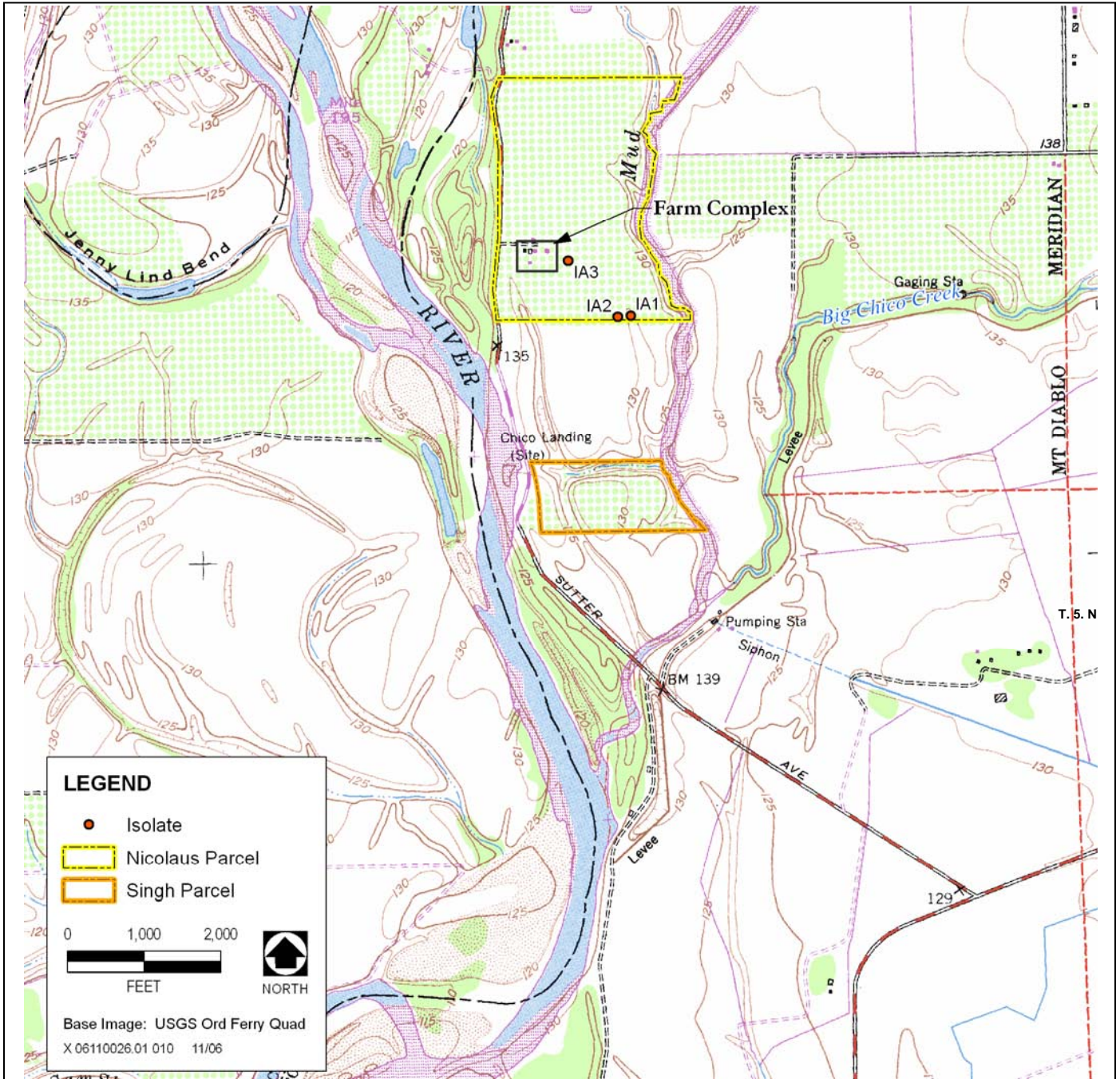
- *Attachments: NONE Location Map Sketch Map Continuation Sheet
- Building, Structure/Object Record Archaeological Record District Record Linear Feature Record
- Milling Station Record Rock Art Record Artifact Record Photograph Record
- Other (List):

State of California C The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

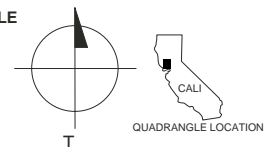
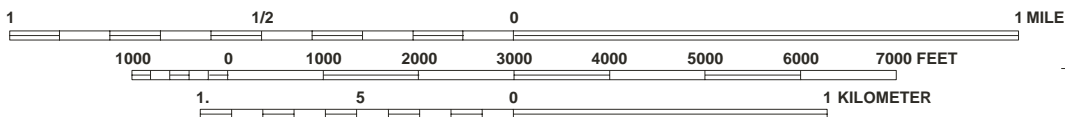
Primary # _____
 HRI # _____
 Trinomial _____

Page 2 of 2 *Resource Name or # (Assigned by recorder) IA3

*Map Name: USGS Ord Ferry Quad Scale: 1:24,000 *Date of Map: 1969



Source: USGS Ord Ferry Quad 1949 (photo revised 1969) -- Contour Interval 40 Feet



APPENDIX F

Air Quality Modeling Data

Construction Emissions Summary (lb/day)

	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1: Grading				
Fugitive Dust	-	-	120.00	25.06
Off-Road Diesel Exhaust	4.62	37.73	2.03	1.87
Worker Trips	0.07	0.13	0.01	0.01
Subtotal Unmitigated	4.69	37.86	122.04	26.94
Phase 2: Paving				
Off-Gas Emissions	2.13	0.00	0.00	0.00
Off-Road Diesel Exhaust	2.78	16.39	1.40	1.29
On-Road Diesel Exhaust	0.46	7.36	0.32	0.28
Worker Trips	0.11	0.21	0.02	0.01
Subtotal Unmitigated	5.48	23.96	1.75	1.58
Phase 3: Building Construction				
Off-Road Diesel Exhaust	4.07	18.22	1.33	1.22
Vendor Trips	0.01	0.09	0.00	0.00
Worker Trips	2.98	5.84	0.65	0.35
Subtotal Unmitigated	7.06	24.15	1.99	1.57
Phase 4: Architectural Coatings				
Off-Gas Emissions	9.74	0.01	0.00	0.00
Worker Trips	0.01	0.00	0.00	0.00
Subtotal Unmitigated	9.74	0.01	0.00	0.00
Maximum Daily Emissions, Unmitigated	9.74	37.86	122.04	26.94
BCAQMD Significance Threshold	137	137	137	-

Land Use Parameters for Estimation of Construction Emissions in URBEMIS

<u>Land Use Types in URBEMIS</u>	<u>Acres</u>	<u>Notes</u>
Headquarters and Day Uses	9.0	New construction modeled in URBEMIS.
Campgrounds	30.0	New construction modeled in URBEMIS.
Restoration	150.0	Not included in URBEMIS Run.

Grading Parameters During Construction of New Park Headquarters and Campgrounds

Project Feature	Comperable Land Use Type Modeled in URBEMIS	Total Acres, Estimated	Acres to be Graded (assumed)
New Park Headquarters	Government civic center	9.00	9.00
Campgrounds	City Park	30.00	15.00
	Total Acres to be Graded		24.00
	Maximum % Graded Per Day		25%
	Maximum Acres Graded Per Day		6.00

Operational CO₂ Emissions

	URBEMIS Emission Estimates			
	Maximum Daily	Maximum Daily	Annual Emissions	Annual Emissions
	Summer	Winter		
	Emissions (lb/day)	Emissions (lb/day)	(lb/year)	(tons/year)
Area Sources	6,791.96	6,780.40	975,875	487.94
Campfires	6,539.51	6,539.51	940,055	470.03
Natural Gas	240.89	240.89	34,628	17.31
Landscaping	11.56	0.00	1,192	0.60
Architectural Coatings	0.00	0.00	0	0.00
Mobile Sources	9,614.84	8,589.49	1,340,478	670.24
Campground	8,145.86	7,277.11	1,135,674	567.84
Headquarters and Day Uses	1,468.98	1,312.38	204,804	102.40
Total	16,406.80	15,369.89	2,316,353	1,158.18

pounds per ton 2,000

Assumed Usage Levels of the Park (for seasonal weighting)

According to estimate provided by Denise Reichenberg of Cal State Parks in an e-mail to Suzanne Enslow of EDAW on Nov. 20, 2007, park operations are projected to operate at varying capacities throughout the year:

Projections of California State Parks Staff

days/year	% capacity	summer/winter
75	100	summer
75	75	half and half
50	25	winter

Adjusted Projections for Summer/Winter Split

days/year	% capacity	summer/winter
75	100	summer
37.5	75	summer
37.5	75	winter
50	25	winter

Summary of Summer/Winter Split

Operation-days per year	operation-days/year
summer	103.125
winter	40.625
total	143.75

An "operation-day" is equivalent to the park operating a full capacity (e.g., full campground) for one day.

Maximum Daily Operational Emissions of Criteria Air Pollutants (lb/day)

	ROG	NO _x	PM ₁₀	PM _{2.5}
Area Sources	441.58	5.26	66.57	64.07
Campfires	440.46	5.00	66.55	64.05
Natural Gas	0.01	0.19	0.00	0.00
Landscaping	0.97	0.07	0.02	0.02
Architectural Coatings	0.14	0.00	0.00	0.00
Mobile Sources	12.84	16.74	16.02	3.09
Campground	10.68	14.01	13.57	2.62
Headquarters and Day Uses	2.16	2.73	2.45	0.47
Total	454.42	22.00	82.59	67.16
BCAQMD's Level B Threshold	25	25	80	-
BCAQMD's Level C Threshold	137	137	137	-

Notes

All estimates were modeled using URBEMIS v.9.2.2.

The emissions of area sources presented are the maximum of daily emissions for summer or winter.

The summer estimates of mobile-source emissions are used from URBEMIS because that is when the greatest levels of use of the campground and day-uses are expected.

Summary of Maximum Daily Trips

	Passenger Vehicles					Other Vehicle Types			Total
	Light Auto	Light Truck <3,750 lb	Light Truck 3,751-5,750 lb	Med Truck 5,751-8,500 lb	Motorcycle	RV	School Bus	Garbage Truck	
Campgrounds	204	45	90	40	15	74	-	-	468
Headquarters and Day Uses	80	18	35	15	6	50	4	2	210
Total	284	63	126	55	20	124	4	2	678

Percentage of Total Fleet Mix

41.9%	9.3%	18.5%	8.1%	3.0%	18.3%	0.6%	0.3%	100.0%
-------	------	-------	------	------	-------	------	------	--------

Notes

Garbage collection vehicles are assumed to be a "heavy-heavy truck" weighing 33,001-60,000 lbs.

The fleet mix percentage for all other vehicle types in URBEMIS should be 0.0%, including the following vehicle types:

- Lite-Heavy Truck 10,001-14,000 lbs.
- Med-Heavy Truck 14,001-33,000 lbs.
- Other Bus
- Urban Bus

Trip Type

100% of trips are considered primary trips.

Trip Lengths

Rural Trip lengths are selected.

100% of the residential trips are assumed to be home-based work trips because they have the greatest rural trip length of 16.8 miles.

This trip distance is assumed to be reasonable because the site is 6.0 miles from Chico, which is the closest population center.

The default trip lengths were used for the commercial-based trips (i.e., for the headquarters and day uses).

Road Dust

100% of trip travel would occur on paved roads.

According to the project description, new roadways and lots in the park would be paved with asphalt, concrete, or aggregate based course.

Passenger Vehicle Fleet Breakdown

It is assumed that, among the passenger cars, the fleet will consist of the following four vehicle types in the save relative proportion of the URBEMIS default values.

	Light Auto	Light Truck <3,750 lb.	Light Truck 3,751-5,750 lb.	Med Truck 5,751-8,500 lb.	Motorcycle	Total
URBEMIS Default Fleet Distribution	49.0	10.9	21.7	9.5	3.5	94.6
% relative to Pass. Car Total	51.8%	11.5%	22.9%	10.0%	3.7%	100.0%

Trips Generated by Campground Visitors

Campgrounds	Camp/RV Sites	Parking Spaces			Estimated Daily Trip Rate (per camp site parking place by vehicle type)			Maximum Daily Trips		
		Pass. Veh.	RV	Total	Pass. Veh.	RV	Total	Pass. Veh.	RV	Total
RV Campground	25	0	25	25	2.0	2.0	4.0	50	50	100
Vehicle Campground	15	15	0	15	4.0	0.0	4.0	60	0	60
Walk-in Tent Campground	10	30	0	30	4.0	0.0	4.0	120	0	120
Group Campground	35	35	12	47	4.0	2.0	4.0	164	24	188
Total	85	80	37	117				394	74	468

Notes/Assumptions

Campground Trip Generation Rates

The daily trip rates for camp sites were estimated based on the number of parking spaces at the campgrounds. Campers make one trip when arriving to the site, one trip when departing, and one round-trip during each day of their stay, and that the length of each stay is one night. This estimate is considered to be conservative compared to the limited trip rate estimates in the Institute of Transportation Engineers' *Trip Generation* manual, 7th Edition (2003). The ITE manual estimates that the weekday trip rate for a Campground/Recreational Vehicle Park is 0.20 trips per occupied camp site during the morning peak hour and 0.37 trips per occupied camp site during the afternoon peak hour. Applying a K-factor of 10 to the higher This estimate is also considered to be conservative because many campers stay at a camp site for multiple nights and, therefore, their arrival and departure trips would not occur every day.

Fleet Mix Assumptions

RV sites generate 2.0 trips per day in RVs and 2.0 trips per day in passenger vehicles; and that other campsites generate 4.0 trips per day in passenger vehicles. One additional garbage truck would serve the park each day, resulting in 2 daily trips. None of the visitor-related trips would occur in buses or trucks greater than 8,500 lb.

Fleet Mix of Campground Trips

	Light Auto	Light Truck <3,750 lb	Light Truck 3,751-5,750 lb	Med Truck 5,751-8,500 lb	Motorcycle	RV	Total
Maximum Daily Trips	204	45	90	40	15	74	468
Percentage of Camp Ground Fleet Mix	43.6%	9.7%	19.3%	8.5%	3.1%	15.8%	100.0%

Trip Generation Rate

	mobile home	Alt. city park
Proxy Land Use in URBEMIS Acres (approx.)	30.0	30
Trip Rate Unit Type	dwelling unit	acres
Units	85	30
Maximum Daily Vehicle Trips	468	468
Trip Rate	5.51	15.60

Trips Generated by New Headquarters and Day Uses

	Parking Spaces (additional)				Estimated Daily Trip Rate (per parking place by vehicle type)				Maximum Daily Trips				Fleet Mix of Trips Generated by Headquarters, Day Uses, and Garbage Collection									
	Pass. Veh.	RV	School Bus	Total	Pass. Veh.	RV	School Bus	Total	Pass. Veh.	RV	School Bus	Garbage Truck	Total	Light Auto	Light Truck <3,750 lb	Light Truck 3,751-5,750 lb	Med Truck 5,751-8,500 lb	Motorcycle	RV	School Bus	Garbage Truck	Total
New Park HQ and Amphitheatre	15	10	1	26	10.0	5.0	4.0	-	150	50	4	0	204	80	18	35	15	6	50	4	2	210
Additional Employee (funding permitted)	1	0	0	1	4.0			-	4	0	0	0	4	38.0%	8.4%	16.8%	7.4%	2.7%	23.8%	1.9%	1.0%	100.0%
Garbage Collection												2	2									
Totals	16	10	1	27					154	50	4	2	210									

Notes/Assumptions

Headquarters/Day Uses Trip Generation Rates

The daily turnover rate would be 5.0 for the passenger vehicle parking spaces and 2.5 for the RV parking spaces. Thus, the daily trip rates for passenger vehicles and RVs would be 10.0 and 5.0, respectfully.

The Amphitheatre would drawl up to two school buses per day, resulting in 4.0 daily trips.

Two school buses would visit the amphitheatre and environmental education area each day resulting in 4.0 daily trips.

Garbage Collection

In addition, the expanded park is expected to generate 2 additional trips per day by a garbage truck to collect refuse at the campgrounds and headquarters.

Garbage collection vehicles are assumed to be a "heavy-heavy truck" weighing 33,001-60,000 lbs.

Redevelopment of Existing Headquarters

Development of the existing headquarters, located west of the river, to a day-use facility was analyzed in the EIR for the BSRSP General Plan (State Parks 2003); therefore, it is not included as part of this project.

Modification of Existing Park Facilities

Modification and maintenance of existing Park facilities was analyzed in the EIR for the BSRSP Preliminary General Plan (State Parks 2003); therefore, modification of the existing day-use area south of the existing headquarters is not included as part of this project.

Trip Generation Rate

Proxy Land Use in URBEMIS [governmnet \(civic center\)](#)

Acres (approx.) 9.0
 Trip Rate Unit Type 1,000 sq. ft.
 Units 10

Maximum Daily Veh Trips 210
 Trip Rate 21.00

Worker Commute Trip % 1.9%

Operation Parameters for Campfires

Number of Fire Rings

<u>Campground</u>	<u>#</u>	<u>notes/source</u>
RV Campground	25	One fire ring per campsites, as described in the project description.
Vehicle Campground	15	One fire ring per campsites, as described in the project description.
Walk-in Tent Campground	10	One fire ring per campsites, as described in the project description.
Group Campground	5	Assuming one fire ring at each of the 4 group picnic shelters plus the group fire ring.
Total Fire Rings	55	summation
Number of residential units	85	equivalent to total number of camp sites
Percentage of residential units with fire rings	64.7%	calculation
Percentage of residential units without fire rings	35.3%	calculation

Operation Parameters

	<u>value</u>	<u>units</u>	<u>notes/source</u>
Number of campfire rings	55	fire rings	project description
Length of camping season	35	weeks/year	estimation, roughly 8 months of a year from March through October
Occupancy rate of camp site	5	days/week	assumption, conservative
Campfires per day per fire ring	1	campfires/day/ring	assumption
Campfires per year	9,625	campfires/year	calculation
Maximum Campfires per day	55	campfires/day	calculation, assumes campground is fully occupied
Avg. campfire size	70	lb	assumption, conservatively high
Mass of wood burned per year	673,750	lb/year	calculation
Maximum mass of wood burned per day	3,850	lb/day	calculation
pounds per ton	2,000	lb/ton	conversion rate
Mass of wood burned per year	337	ton/year	conversion calculation
Maximum mass of wood burned per day	1.93	ton/day	conversion calculation
pounds per cord	2,458	lb/cord	default conversion rate in URBEMIS 2007
Volume of wood burned per year	274.10	cords/year	conversion calculation
Maximum volume of wood burned per day	1.57	cords/day	conversion calculation
Campfire usage	175	days/yr/campfire	
Wood burned per year per fire ring	4.98	cords/yr/campfire	

Architectural Coatings Parameters

The Residential % Surface Area Repainted Each Year is estimated based on the number of restroom structures at the campgrounds, instead of the number of camp sites.

<u>Campgrounds</u>	<u>Number of Restroom Facilities</u>		
RV Campground	2	Number of campsites	85
Vehicle Campground	2	Percent of campsites with structure (ratio restrooms:campsites)	7.1%
Walk-in Tent Campground	0	URBEMIS Default Residential % Surface Area Repainted Each Year	10.0%
Group Campground	2	Actual Residential % Surface Area Repainted Each Year	0.7%
Total	6		

The URBEMIS default value of 10.0% is used for the Nonresidential % Surface Area Repainted Each Year.

Natural Gas Parameters

	<u>Percent Using Natural Gas</u>	<u>Assumption</u>
Residential	7.1%	The restroom facilities in the campgrounds will have natural gas water heaters.
NonResidential	100.0%	The HQ facility will have a natural gas supply.

Landscaping

Length of Summer (days) 240

It is assumed that some landscaping activities would occur March through October, which is approx. 240 days of the year.

	Singh	Nicolaus	Total
Parcel size (acres)	43	146	189
Facilities Footprint (acres)	0	21	21

total restored habitat acres The proposed project would add approximately 150 acres of restored riparian habitat

All the campgrounds and the new park headquarters would be located on the Nicolaus property.

Detail Report for Summer Area Source Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\sacramento\Application Data\Urbemis\Version9a\Projects\Singh & Nicolaus\Singh&Nicolaus.urb9

Project Name: Singh and Nicolaus Operations

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.01	0.19	0.11	0.00	0.00	0.00	240.89
Hearth - No Summer Emissions							
Landscape	0.97	0.07	7.15	0.00	0.02	0.02	11.56
Consumer Products	4.16						
Architectural Coatings	0.14						
TOTALS (lbs/day, unmitigated)	5.28	0.26	7.26	0.00	0.02	0.02	252.45

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 7.1%

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 64.7%

Percentage of residences with natural gas fireplaces changed from 55% to 0%

Cords of wood burned per year per wood fireplace changed from 0.28 cords per year to 4.98 cords per year

Days used per year per wood stove changed from 82 days to 175 days

Length of summer period for landscape equipment changed from 180 days to 240 days

The residential percentage of surface area repainted each year changed from 10% to 0.7%

Detail Report for Winter Area Source Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\sacramento\Application Data\Urbemis\Version9a\Projects\Singh & Nicolaus\Singh&Nicolaus.urb9

Project Name: Singh and Nicolaus Operations

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.01	0.19	0.11	0.00	0.00	0.00	240.89
Hearth	440.46	5.00	485.85	0.77	66.55	64.05	6,539.51
Landscaping - No Winter							
Consumer Products	4.16						
Architectural Coatings	0.14						
TOTALS (lbs/day, unmitigated)	444.77	5.19	485.96	0.77	66.55	64.05	6,780.40

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 7.1%

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 64.7%

Percentage of residences with natural gas fireplaces changed from 55% to 0%

Cords of wood burned per year per wood fireplace changed from 0.28 cords per year to 4.98 cords per year

Days used per year per wood stove changed from 82 days to 175 days

Length of summer period for landscape equipment changed from 180 days to 240 days

The residential percentage of surface area repainted each year changed from 10% to 0.7%

Phase Assumptions

Phase: Fine Grading 3/1/2008 - 3/15/2008 - grading

Total Acres Disturbed: 24

Maximum Daily Acreage Disturbed: 6

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 3/16/2008 - 3/31/2008 - Paving of campground roads and HQ parking lot

Acres to be Paved: 9.75

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 4/1/2008 - 4/30/2008 - Construction of campground facilities and rehab of new Park HQ

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 5/1/2008 - 5/31/2008 - Architectural coatings of new HQ and camground bathrooms

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Urbemis 2007 Version 9.2.2

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\sacramento\Application Data\Urbemis\Version9a\Projects\Singh & Nicolaus\Singh&Nicolaus.urb9

Project Name: Singh and Nicolaus Operations

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Mobile home park	10.68	14.01	154.47	0.08	13.57	2.62	8,145.86
Government (civic center)	2.16	2.73	28.79	0.01	2.45	0.47	1,468.98
TOTALS (lbs/day, unmitigated)	12.84	16.74	183.26	0.09	16.02	3.09	9,614.84

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Mobile home park	30.00	5.51	dwelling units	85.00	468.35	7,868.28
Government (civic center)		21.00	1000 sq ft	10.00	210.00	1,418.32
					678.35	9,286.60

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	41.9	1.6	98.0	0.4
Light Truck < 3750 lbs	9.3	3.7	90.8	5.5
Light Truck 3751-5750 lbs	18.5	0.9	98.6	0.5
Med Truck 5751-8500 lbs	8.1	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	100.0
Motorcycle	3.0	71.4	28.6	0.0
School Bus	0.6	0.0	0.0	100.0
Motor Home	18.3	10.0	80.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
Government (civic center)				1.9	1.0	97.2

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Urbemis 2007 Version 9.2.2

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\sacramento\Application Data\Urbemis\Version9a\Projects\Singh & Nicolaus\Singh&Nicolaus.urb9

Project Name: Singh and Nicolaus Operations

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	5.28	0.26	7.26	0.00	0.02	0.02	252.45

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	12.84	16.74	183.26	0.09	16.02	3.09	9,614.84

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	18.12	17.00	190.52	0.09	16.04	3.11	9,867.29

Urbemis 2007 Version 9.2.2

Summary Report for Winter Emissions (Pounds/Day)

File Name: C:\Documents and Settings\sacramento\Application Data\Urbemis\Version9a\Projects\Singh & Nicolaus\Singh&Nicolaus.urb9

Project Name: Singh and Nicolaus Operations

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	444.77	5.19	485.96	0.77	66.55	64.05	6,780.40

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	15.15	25.25	206.15	0.08	16.02	3.09	8,589.49

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	459.92	30.44	692.11	0.85	82.57	67.14	15,369.89

APPENDIX G

Mitigation, Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

INTRODUCTION

The California Environmental Quality Act (CEQA) requires public agencies to adopt a mitigation reporting or monitoring program for all projects for which an environmental impact report has been prepared (Public Resources Code, Section 21081.6; State CEQA Guidelines, Section 15091). This is intended to ensure the implementation of all mitigation measures adopted through the CEQA process. Specifically, Section 21081.6(a)(1) of the Public Resources Code requires a lead or responsible agency to "... adopt a reporting or monitoring program for changes made to the project or conditions of project approval, adopted to mitigate or avoid significant effects on the environment."

The California Department of Parks and Recreation (State Parks), with planning assistance from the Nature Conservancy (TNC), is proposing to implement the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project on two parcels known as the Singh Unit and Nicolaus property (collectively known as the project site) along the Sacramento River within and adjacent to Bidwell-Sacramento River State Park (BSRSP or Park).

State Parks is the lead agency for this project under CEQA. A Final Environmental Impact Report (EIR) for the project was certified on **X**, 2008, by the Director of State Parks. State Parks also filed a Notice of Determination with the State Clearinghouse on **X**, 2008, along with Findings of Fact for the project.

This mitigation monitoring and reporting program (MMRP) includes all mitigation measures adopted in the Final EIR.

PROGRAM MANAGEMENT

The MMRP for the proposed project will be in place through all phases of the project including design, construction, and operation. As lead agency under CEQA, State Parks is responsible for the overall implementation and management of the MMRP, including the project design and construction phases of work, and the long-term operation and maintenance of the project.

State Parks is responsible for ensuring that the following procedures and measures are implemented. State Parks shall include appropriate mitigation measures or conditions in third-party contracts entered into by the agency.

1. State Parks has agreed to implement the mitigation measures listed in this MMRP as part of the proposed project. The MMRP is contained within the following matrix and consists of timing of mitigation, monitoring frequency, responsibility for compliance, and date of compliance.
2. A qualified specialist(s) will perform or monitor mitigation activities requiring particular expertise or professional licenses and certifications.
3. Mitigation measures will be included as appropriate in applicable design-build bid packages.
4. The MMRP will be distributed to appropriate parties so that specific actions can be developed to carry out the necessary mitigation.
5. Appropriate individuals at the job site, based on the nature of the mitigation measure, shall initial and date the MMRP to note the implementation and completion of mitigation measures.

6. The State Parks Director or an assignee will approve by signature and date the completion of each item identified in the MMRP.
8. Unanticipated circumstances requiring the modification or addition of mitigation measures may arise. The State Parks Director will be responsible for approving any such modifications or additions. Any approved modifications or additions shall also be reflected in the MMRP.
9. The State Parks Director has the authority to stop the work of contractors if compliance with any aspects of the MMRP is not occurring after appropriate notifications have been issued.

The MMRP will be kept on file at the State Park District office. Copies will be available upon request at the following address:

California Department of Parks and Recreation
Northern Buttes District/Valley Sector
525 Esplanade
Chico, California 95926

Mitigation Monitoring and Reporting Program				
Mitigation Measure	Initiation of Mitigation	Monitoring Frequency	Responsibility for Verification of Compliance	Date Compliance Completed
4.3 Hydrology and Water Quality				
<p>Mitigation Measure 4.3-c: Acquire Appropriate Regulatory Permits and Implement SWPPP and BMPs.</p> <p>Before the approval of grading permits and improvement plans for proposed recreational facilities, the project applicant shall obtain a SWRCB statewide NPDES stormwater permit for general construction activity, and any other necessary site-specific WDRs or waivers under the Porter-Cologne Act. The project applicant shall prepare and submit the appropriate Notice of Intents (NOIs) and prepare the SWPPP with BMPs and any other necessary engineering plans and specifications for pollution prevention and control.</p>	Prior to approval of grading permits, during construction, and following construction	As needed during and following construction	State Water Resources Control Board	
4.4 Biological Resources				
<p>Mitigation Measure 4.4-e: Avoidance of Disturbance to Nesting Raptors and Special-status Birds.</p> <p>Osprey, white-tailed kite, northern harrier, Cooper's hawk, Swainson's hawk, western yellow-billed cuckoo, bank swallow, loggerhead shrike, yellow warbler, and yellow-breasted chat are known to or have potential to nest adjacent to the project site. In addition to these special-status species, the nests of all raptor species are protected under §3503.5 of the California Fish and Game Code. Nest disturbance may be entirely avoided by limiting construction to the non-breeding season (generally September 1 to January 31) to the extent feasible. To avoid nest disturbance and a potential reduction in fledging success resulting from construction activities during the breeding season (February 1 to August 31), focused surveys for raptors and special-status birds</p>	Prior to construction	As needed during construction	California Department of Fish and Game	

Mitigation Monitoring and Reporting Program				
Mitigation Measure	Initiation of Mitigation	Monitoring Frequency	Responsibility for Verification of Compliance	Date Compliance Completed
<p>would be conducted by a qualified biologist no more than 14 days prior to the beginning of construction. Surveys for Swainson’s hawk nests would include all areas of suitable nesting habitat within 0.25-mile of the two sites. To the extent feasible, guidelines provided in the Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in the Central Valley (Swainson’s Hawk Technical Advisory Committee 2000) would be followed. Surveys for other raptors and special-status birds would include suitable nesting habitat within 500 feet of each site.</p> <p>If no active nests are found, no further measures would be needed. If active nests are found, impacts would be avoided by the establishment of appropriate buffers and/or nest monitoring by a qualified biologist. The size of the buffer would be determined by a qualified biologist and may vary, depending on the species biology, location, nest stage, and specific construction activities to be performed while the nest is active. No construction activities would occur within a buffer zone until a qualified biologist confirms that the nest is no longer active.</p>				
<p>Mitigation Measure 4.4-e Avoidance of Disturbance to Nesting Migratory Birds and Roosting Bats.</p> <p>As discussed for nesting raptors and special-status birds, nest disturbance of other migratory birds may be entirely avoided by limiting construction to the autumn and winter non-breeding season to the extent feasible. To avoid nest disturbance and a potential reduction in fledging success during any construction activities during the spring and summer breeding season, the project site’s walnuts and almonds would</p>	Prior to construction	As needed during construction	California Department of Fish and Game	

Mitigation Monitoring and Reporting Program				
Mitigation Measure	Initiation of Mitigation	Monitoring Frequency	Responsibility for Verification of Compliance	Date Compliance Completed
<p>be harvested for the last time the previous autumn, and standard orchard maintenance practices (e.g., mowing and herbicide applications) would continue until construction begins to discourage bird nesting and bat roosting in the orchard prior to felling of the trees.</p> <p>Because orchards would be restored to native habitats anticipated to support a higher diversity and abundance of wildlife species without significantly reducing populations of the species currently on site, the proposed restoration of native riparian habitat would have a long-term beneficial effect on wildlife. Potential impacts to existing wildlife that may occur during construction, maintenance, and visitor use of the proposed riparian habitat and recreational facilities would be expected to be minor, and would be largely avoided or minimized through the wildlife protection measures described in Mitigation Measure 4.4-e. These measures comply with the Park Plan and all applicable state and federal laws. Because the benefits to wildlife of the proposed habitat restoration are expected to be more substantial than any potential construction, maintenance, or visitor use impacts that may occur, the overall effect of the proposed project is considered <i>beneficial</i> to wildlife species, and there would not be any substantial adverse effect to special-status species, their use of wildlife movement corridors, or nursery sites.</p>				
4.5 Cultural Resources				
<p>Mitigation Measure 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.</p>	During construction	As needed during construction	State Parks	

Mitigation Monitoring and Reporting Program				
Mitigation Measure	Initiation of Mitigation	Monitoring Frequency	Responsibility for Verification of Compliance	Date Compliance Completed
<p>All excavations shall be monitored by a qualified professional archaeologist. If a 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 State Parks staff shall be notified of the discovery. State Parks shall retain a professional archaeologist who, in consultation with the Mechoopda Tribe of Chico, shall determine whether the resource is potentially significant as per the CRHR and develop appropriate mitigation. Appropriate mitigation may include no action, avoidance of the resource, and potential data recovery.</p>				
<p>Mitigation Measure 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.</p> <p>California law recognizes the need to protect interred human remains, particularly Native American burials and associated items of patrimony, from vandalism and inadvertent destruction. The procedures for the treatment of discovered human remains are contained in California Health and Safety Code Section 7050.5 and Section 7052 and California Public Resources Code Section 5097.</p> <p>In accordance with the California Health and Safety Code, if human remains are found in any location other than a dedicated cemetery, the California Health and Safety Code requires that excavation is halted in the immediate area. The county coroner shall be</p>	During construction	As needed during construction	State Parks	

Mitigation Monitoring and Reporting Program				
Mitigation Measure	Initiation of Mitigation	Monitoring Frequency	Responsibility for Verification of Compliance	Date Compliance Completed
<p>notified and is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (Section 7050.5[c]).</p> <p>The responsibilities of the NAHC for acting upon notification of a discovery of Native American human remains are identified within the California Public Resources Code (PRC Section 5097.9). The NAHC is responsible for immediately notifying the person or group it believes is the Most Likely Descendant (MLD). With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. This should be conducted within 24 hours of their notification by the NAHC (PRC Section 5097.98[a]). If an agreement for treatment of the remains cannot be resolved satisfactorily, any of the parties may request mediation by the NAHC (PRC Section 5097.94[k]). Should mediation fail, the landowner or the landowner's representative must re-inter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC Section 5097.98[b]).</p>				
4.6 Air Quality and Climate Change				
<p>Mitigation Measure 4.6-a: Implement Measures to Reduce Short-Term Restoration- and Construction Emissions of ROG, NO_x, and PM₁₀.</p> <p>In accordance with BCAQMD recommendations, State Parks shall require restoration and construction</p>	During construction	As needed during construction	State Parks	

Mitigation Monitoring and Reporting Program				
Mitigation Measure	Initiation of Mitigation	Monitoring Frequency	Responsibility for Verification of Compliance	Date Compliance Completed
<p>contractors to implement the following measures to reduce emissions generated by restoration and construction activities:</p> <ul style="list-style-type: none"> ▶ No open burning shall be performed on the project site. Use alternatives to open burning of vegetative material such as reuse of biomass material for habitat restoration; chipping; or mulching. Alternatively, vegetative material could be hauled/provided to a biomass power facility. The closest biomass power facility is operated jointly by Pacific Oroville Power, Inc. in conjunction with NorCal Waste Systems. ▶ On-site vehicles shall be limited to a speed of 15 mph on unpaved roads and surfaces. ▶ A publicly visible sign shall be posted at the site with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours. BCAQMD's telephone number shall also be visible to ensure compliance with BCAQMD Rule 200 & 205 (Nuisance and Fugitive Dust Emissions). ▶ Vehicles entering or exiting the project site shall travel at a speed which minimizes dust emissions and trackout. ▶ Restoration and construction workers shall park in designated parking areas(s) to help reduce dust emissions. Soil pile surfaces shall be moistened if dust is being emitted from the pile(s). Adequately secured tarps, plastic or other material may be 				

Mitigation Monitoring and Reporting Program				
Mitigation Measure	Initiation of Mitigation	Monitoring Frequency	Responsibility for Verification of Compliance	Date Compliance Completed
<p>required to further reduce dust emissions.</p> <ul style="list-style-type: none"> ▶ Dust suppression measures shall be applied to disturbed areas that are unused for at least four consecutive days. Measures may include the following: frequent watering (a minimum of 2 times per day); covering with weed-free straw mulch; or application of chemical stabilizers. ▶ Vegetative ground cover shall be planted in disturbed areas as soon as possible. ▶ Land clearing, grading, earth moving, or excavation activities shall be suspended when winds exceed 20 miles per hour. ▶ Paved streets adjacent to the restoration and construction sites shall be swept or washed at the end of each day as necessary to remove excessive accumulations of silt and/or mud which may have accumulated as a result of activities on the project sites. ▶ When not in use, idling of on-site equipment shall be minimized. Under no conditions shall on-site equipment shall be left idling for more than 5 minutes. 				
<p>Mitigation Measure 4.6-b: Prohibit campfires during burn bans established by Cal-Fire and/or BCAQMD’s “Don’t Light Tonight” Advisory Program.</p> <p>Pursuant to Park Plan Guideline AO-3.3-2, which states that State Parks shall establish appropriate campfire restrictions, through coordination with the</p>	Following construction	As needed during burn bans	State Parks	

Mitigation Monitoring and Reporting Program				
Mitigation Measure	Initiation of Mitigation	Monitoring Frequency	Responsibility for Verification of Compliance	Date Compliance Completed
<p>local air district in conjunction with the development of an overnight campground at the Park, State Parks shall notify park users of all burn-ban periods determined by the California Department of Forestry and Fire Protection. Burn-ban periods established by the California Department of Forestry and Fire Protection apply to all vegetative and wood burning, including campfires and other burning activities on state land inside Butte County, with no exceptions made by BCAQMD Rule 300, part 2.10 (Williams, pers. comm., 2007). BCAQMD Rule 300, part 2.10 exempts campfires and some other types of burning from burn prohibitions established by other BCAQMD rules. Typically, the California Department of Forestry and Fire Protection begins the burn ban season around July 1 and it extends through October. In addition, the campgrounds at BSRSP shall also participate in BCAQMD's "Don't Light Tonight" program, in which BCAQMD requests that County residents not use woodstoves and fireplaces when air pollution approaches unhealthy levels (BCAQMD 2007c). These advisories are typically in effect for 24-hour periods. State Parks shall keep campground users informed of burn bans by posting notices on kiosks at the park headquarters, self-pay kiosks, and campground restroom and shower facilities. State Parks shall also inform campground users of burn bans upon check-in to the campground.</p>				