

Sacramento Intermodal Transportation Facility



Biological Assessment

Sacramento, California

HPL—5002(090)

EA 03-0L0364L

January 2009



Biological Assessment

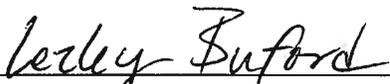


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U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

THE STATE OF CALIFORNIA
Department of Transportation

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Summary

S.1 Project Description

The Federal Highway Administration (FHWA), the California Department of Transportation (Caltrans), and the City of Sacramento (City), in cooperation with the Federal Transit Administration and the Federal Railroad Administration, propose to expand the existing Sacramento Valley Station (Station) to meet current needs and to establish a state-of-the-art regional transportation center to meet the future needs of rail and bus transit passengers and service operators in the Sacramento region through the year 2025 and beyond. Developed in three phases, the Sacramento Intermodal Transportation Facility (SITF) (proposed project) would encompass a realignment of existing mainline rail tracks (Phase 1); improvements to the existing Station, which includes the current Southern Pacific Railroad (SPRR) Depot (the Depot) (Phase 2); and an eventual transformation of the Station into a multimodal transportation center (Phase 3).

The proposed project is located within the historic commercial and government center of the Sacramento region, north of the State Capitol (Figure 1-1). The project site lies within the Central Business District of the downtown area of Sacramento and within the *Sacramento Railyards Specific Plan* (RSP) area, just south of the historic SPRR Sacramento Shops complex (the remnants of which are known as the Central Shops buildings). The project site is generally bounded by I Street on the south, 2nd Street and the Sacramento River riverfront on the west, 7th Street on the east, and the Central Shops buildings on the north (Figure 1-2). The site includes the historic Depot, which currently houses the Sacramento Amtrak station; operations for interstate passenger rail service and the Capitol Corridor and San Joaquin Corridor intercity services; the existing Union Pacific Railroad (UPRR) freight rail lines, passenger platforms, and tunnel; Sacramento Regional Transit's (RT's) light rail transit (LRT) line and station; bus loading areas for multiple service providers; and associated passenger parking. The Depot and all of its associated facilities are known as the Station. The privately owned Railway Express Agency (REA) building is located immediately adjacent to the project site (near the Depot) but is not part of the existing Station or proposed project.

The proposed project site consists of approximately 33 acres, including the existing Station facilities that are owned by the City. The City is in the process of acquiring additional land immediately north of the Station for the proposed project. The area to be acquired also contains the approximately 3,300-foot-long UPRR rail corridor (current alignment and proposed realignment) between the Sacramento River and 7th Street.

For all phases, construction staging, equipment lay down, and access and material storage for all work would occur within the project footprint or on existing access roads. Track installation materials would be brought in by rail. Phase 1 would be constructed and fully operational in 2010. Phase 2 would start construction in the first quarter of 2011, after the completion of Phase 1, and would be completed in approximately 3 years. The timing of Phase 3 is uncertain and depends on the build alternative selected and the availability of funding.

S.2 Purpose and Need

S.2.1 Purpose

The proposed project is a mass transportation project and is intended to enhance and upgrade existing mass transit facilities as well as provide new transit facilities, thereby meeting existing and projected future user and provider needs and facilitating multiple forms of transportation modes, including rail, transit, pedestrian, and bicycle. The project also would help to decrease the Sacramento region's reliance on automobiles and remove traffic from the interstate and highway system, as well as accommodating a future high-speed-rail project, which may be developed by the state.

S.2.2 Need

There have been five train terminals at various locations in downtown Sacramento, beginning with the first Central Pacific Railroad terminal built in 1879 and culminating with the current Depot built in 1925, which is the only facility in Sacramento remaining in regular passenger service. As originally built, the Depot had a direct relationship to the main civic corridor of I Street, connecting arriving and departing passengers directly to the downtown core via 4th and I Streets. This connection has been compromised in a number of ways, including by construction of the Interstate 5 (I-5) on-ramp and the installation of heavy landscaping. Pedestrians wishing to access the Depot must navigate a heavily trafficked intersection and walk through several parking lots to reach the Depot's main entrance.

Currently, the Depot houses the Sacramento Amtrak station; operations for interstate passenger rail service and the Capitol Corridor and San Joaquin Corridor intercity services; the existing UPRR freight rail lines, passenger platforms, and tunnel; RT's LRT line and station; bus loading areas for multiple service providers; and passenger parking. The Depot and all of its associated facilities are known as the Sacramento Valley Station (Station). The use of the Depot has increased substantially over the past several years with the addition of Capitol Corridor trains to meet the increasing commuter demand between the San Francisco Bay Area (Bay Area) and Sacramento and the addition of the LRT.

Thus, the proposed project is needed because, the existing Depot facilities are undersized and deficient in ticketing, baggage handling, parking, administrative areas, the number of berths for buses, passenger amenities (such as food and services purveyors), passenger and pedestrian safety, and accommodating additional transit providers.

Additionally, the UPRR mainline tracks located directly north of the Depot are shared by the Capitol Corridor intercity rail service, which operates passenger service between the Bay Area and Auburn; the Amtrak transcontinental passenger service; and the San Joaquin Corridor rail service, which operates between Sacramento and Bakersfield. The existing track configuration substantially reduces the velocity at which freight trains can pass through the area. Freight trains are also delayed ("held out") to wait for passenger trains at the Station to load and unload passengers.

S.3 Effects on Species Listed under the Federal Endangered Species Act

One species listed under the federal Endangered Species Act (ESA), valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*), has the potential to occur in the study area and be affected by the proposed project.

S.3.1 Valley Elderberry Longhorn Beetle

Four elderberry shrubs (*Sambucus* spp.) that provide potential habitat for VELB were identified within the study area. One of these shrubs has exit holes, and all occur in nonriparian habitat.

S.4 Critical Habitat

According to the recovery plan for VELB (U.S. Fish and Wildlife Service 1984), the study area does not encompass areas designated as critical or essential habitat for VELB. Critical habitat occurs approximately 3.2 kilometers (2 miles) east of the study area.

S.5 Avoidance, Minimization, and Mitigation Measures

Implementation of the following measures would avoid, minimize, and mitigate impacts on VELB that may occur in elderberry shrubs affected by project construction. These measures are from the U.S. Fish and Wildlife Service (USFWS) *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*, dated July 9, 1999.

- Establish a 6.1-meter-wide (20-foot-wide) buffer (minimum) around all elderberry shrubs where feasible.
- Conduct mandatory contractor/worker awareness training for construction personnel.
- Implement dust control measures.
- Transplant three elderberry shrubs that would be directly affected by the proposed project to a USFWS-approved mitigation bank: the River Ranch Conservation Bank in Yolo County.
- Compensate for direct impacts on three elderberry shrubs that provide habitat for VELB by purchasing mitigation credits from a USFWS-approved mitigation bank. The River Ranch Conservation Bank in Yolo County, which is run by Wildlands Inc., has been identified as a mitigation bank with available credits to mitigate for VELB impacts.

S.6 Effects Determination

In conclusion, the proposed project would directly affect three elderberry shrubs that provide suitable habitat for VELB and could adversely affect VELB if they are present within these shrubs. One shrub would be affected indirectly by proposed construction activities. Avoidance

and minimization measures are identified in this document to minimize adverse effects on VELB, a species listed under the federal ESA. Because direct effects on VELB cannot be avoided, this biological assessment (BA) concludes that the proposed project is likely to affect VELB adversely. Take of VELB habitat would be covered by the U.S. Department of Transportation FHWA's programmatic consultation with the USFWS for impacts on VELB (U.S. Fish and Wildlife Service 1997). The project will be appended to this programmatic agreement.

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List of Abbreviated Terms

ADA	Americans with Disabilities Act
BA	biological assessment
Bay Area	San Francisco Bay Area
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CDFA	California Department of Food and Agriculture
City	City of Sacramento
CNDDB	California Natural Diversity Database
the Depot	Southern Pacific Railroad Depot
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FR	Federal Register
GIS	geographic information system
GPS	Global Positioning System
I-5	Interstate 5
LRT	light rail transit
NEPA	National Environmental Policy Act
proposed project	Sacramento Intermodal Transportation Facility
REA	Railway Express Agency
RSP	<i>Sacramento Railyards Specific Plan</i>
RT	Sacramento Regional Transit
SITF	Sacramento Intermodal Transportation Facility
SPRR	Southern Pacific Railroad
Station	Sacramento Valley Station
UPRR	Union Pacific Railroad
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VELB	valley elderberry longhorn beetle

Chapter 1 Introduction

The Federal Highway Administration (FHWA), the California Department of Transportation (Caltrans), and City of Sacramento (City), in cooperation with the Federal Transit Administration and the Federal Railroad Administration, propose to expand the existing Sacramento Valley Station (Station) to meet current needs and to establish a state-of-the-art regional transportation center to meet the future needs of rail and bus transit passengers and service operators in the Sacramento region through the year 2025 and beyond. Developed in three phases, the Sacramento Intermodal Transportation Facility (SITF) (proposed project) would encompass a realignment of existing mainline rail tracks (Phase 1); improvements to the existing Station, which includes the current Southern Pacific Railroad (SPRR) Depot (the Depot) (Phase 2); and eventual transformation of the Station into a multimodal transportation center (Phase 3).

Design information for Phase 1 and Phase 2 is at a level sufficient to conduct site-specific analyses, but design information for Phase 3 is currently at a conceptual level. Therefore, the environmental analysis in this biological assessment (BA) is at a project-specific level for Phases 1 and 2 and at a program level for Phase 3. (It is anticipated that the FHWA, as the lead agency under the National Environmental Policy Act (NEPA), will have sufficient information to make a decision on whether to approve the entire proposed project and to authorize construction of Phases 1 and 2 on completion of the NEPA process, but a decision for Phase 3 will not be made until a later date when more detailed design information and subsequent environmental review under NEPA has been completed.)

The proposed project is located within the historic commercial and government center of the Sacramento region, north of the State Capitol (Figure 1-1). The project site lies within the Central Business District of the downtown area of Sacramento and within the *Sacramento Railyards Specific Plan* (RSP) area, just south of the historic SPRR Sacramento Shops complex (the remnants of which are known as the Central Shops buildings). The project site is generally bounded by I Street on the south, 2nd Street and the Sacramento River riverfront on the west, 7th Street on the east, and the Central Shops buildings on the north (Figure 1-2). The site includes the historic Depot, which currently houses the Sacramento Amtrak station; operations for interstate passenger rail service and the Capitol Corridor and San Joaquin Corridor intercity services; the existing Union Pacific Railroad (UPRR) freight rail lines, passenger platforms, and tunnel; Sacramento Regional Transit's (RT's) light rail transit (LRT) line and station; bus loading areas for multiple service providers; and associated passenger parking. The Depot and all of its associated facilities are known as the Station. The privately owned Railway Express Agency (REA) building is located immediately adjacent to the project site (near the Depot) but is not part of the existing Station or proposed project.

The proposed project site consists of approximately 33 acres, including the existing Station facilities that are owned by the City. The City is in the process of acquiring additional land immediately north of the Station for the proposed project. The area to be acquired also contains the approximately 3,300-foot-long UPRR rail corridor (current alignment and proposed realignment) between the Sacramento River and 7th Street.

For all phases, construction staging, equipment lay down, and access and material storage for all work would occur within the project footprint or on existing access roads. Track installation materials would be brought in by rail. Phase 1 would be constructed and fully operational in 2010. Phase 2 would start construction in the first quarter of 2011, after the completion of Phase 1, and would be completed in approximately 3 years. The timing of Phase 3 is uncertain and depends on the build alternative selected and the availability of funding.

1.1 Phase Descriptions

1.1.1 Phase 1—Track Relocation

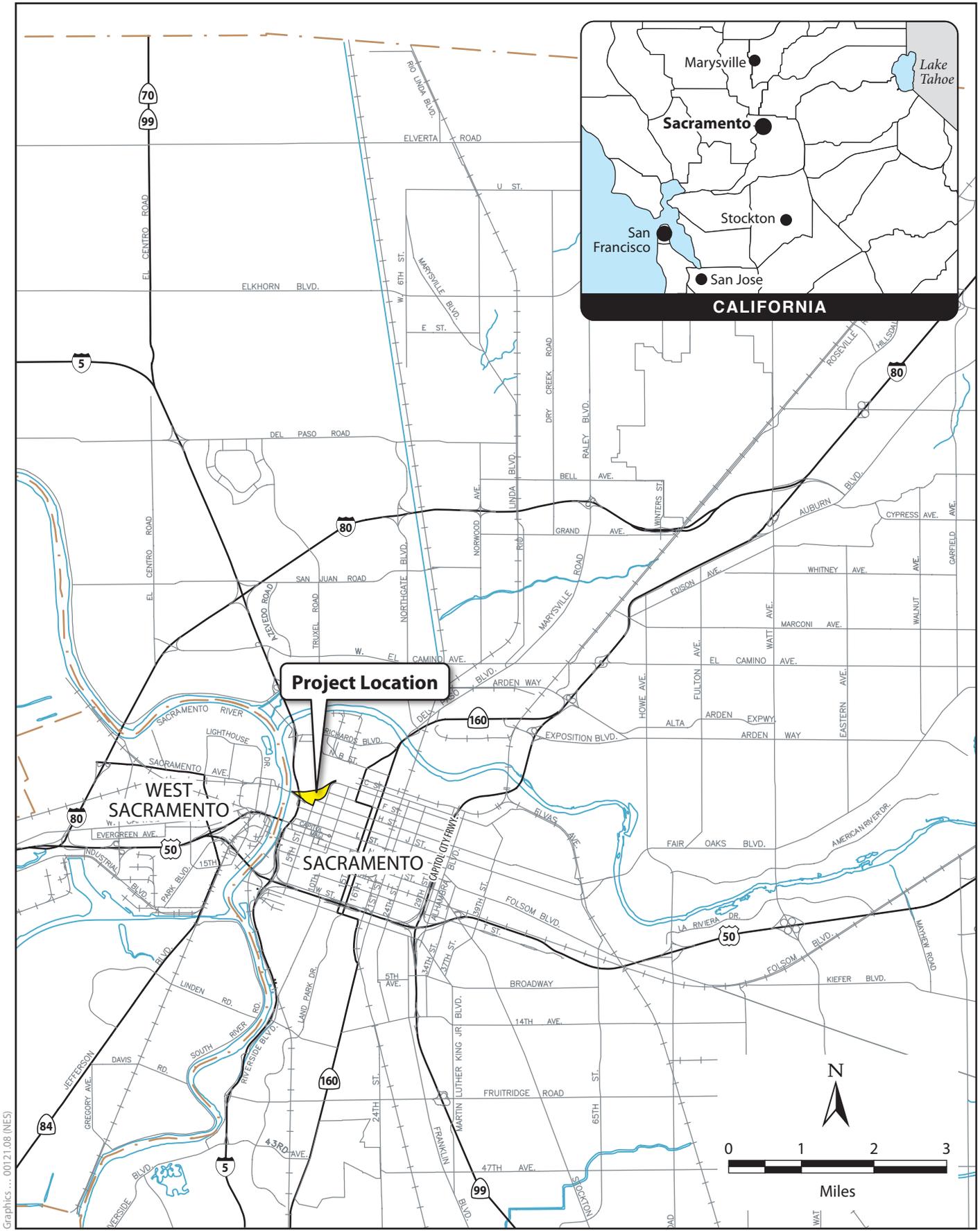
Phase 1 would consist of the following components, which are identical for both build alternatives (Figure 1-3):

- preparing the new alignment for relocation of the existing mainline freight and passenger tracks;
- installing new freight tracks, new passenger tracks, and associated equipment within the platform area;
- constructing new double-sided passenger platforms;
- constructing a new passenger platform tunnel (the Central Tunnel), service tunnel (West Service Tunnel), and pedestrian/bicycle tunnel (West Pedestrian/Bicycle Tunnel) under the relocated tracks;
- constructing a pedestrian walkway from the passenger platform tunnel (Central Tunnel) to the Depot building on the south side of the rail corridor;
- constructing a pedestrian connection from the passenger platform tunnel (Central Tunnel) to the north side of the rail corridor;
- constructing a service access pathway from the Depot to the proposed new passenger tracks, consisting of an at-grade crossing of the tracks on the west side of the platforms, the service roadway between the platforms, and the paved drive between the Depot and the at-grade crossing; and
- removing the existing mainline tracks and passenger platforms behind the Depot once the new track alignment was operational (the ramps to the platform that are part of the existing pedestrian tunnel at the Depot would be subsequently connected to the new walkway).

The environmental effects of these components are analyzed at a project level of detail in this BA.

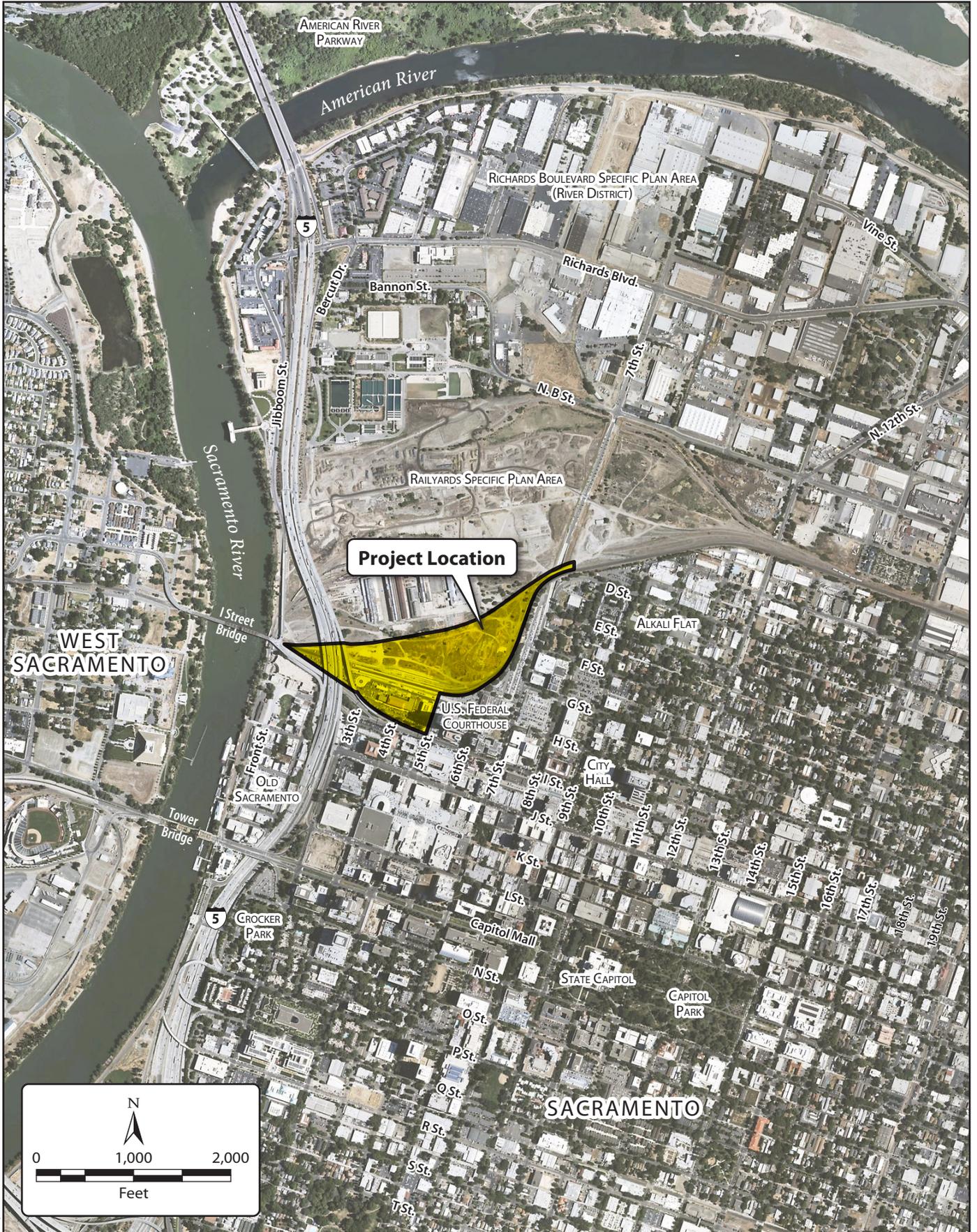
1.1.2 Phase 2—Sacramento Valley Station Improvements

Phase 2 would consist of improvements to the existing Station that would upgrade its facilities and relocate transportation uses for more efficient operations, including improvements to the



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**Figure 1-1
Project Vicinity**



**Figure 1-2
Project Location**

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existing Depot. Phase 2 consists of the following components, which are identical in both build alternatives (Figure 1-3):

- relocating, reconfiguring, and repaving/restriping the existing RT and Amtrak bus berths;
- relocating the existing LRT station to a north–south alignment on the eastern edge of the site as planned by RT, which would create better internal site circulation and proximity to the bus berths and to the long-distance passenger rail service from LRT trains;
- providing enhanced passenger connections, including walkway upgrades (e.g., street furniture, a shade/weather covering, and landscaping/lighting) from the new passenger platforms to the Depot and a tunnel extension that connects the existing Depot tunnel and the Central Tunnel constructed in Phase 1;
- relocating and reconfiguring passenger vehicle and bicycle parking to accommodate existing parking demand and improve the drop-off area in front of the Depot;
- upgrading the electrical system at the station and within the Depot to meet functional needs and requirements; and
- providing a transit way along the north side of the site connecting the west side of the facility to the extension of F Street to facilitate bus circulation on the site and provide shortcuts separate from congested city streets.

The Phase 2 improvements would be constructed after the tracks had been relocated. The environmental effects of these components are analyzed at a project level of detail in this BA.

1.1.3 Phase 3—Intermodal Improvements

Phase 3 would consist of the following components (Figure 1-3):

- converting the existing Station into a large, multimodal regional transportation facility that integrates a classic transportation building and a new terminal;
- expanding bus bays;
- expanding baggage facilities;
- constructing multiple waiting areas;
- expanding site features that serve passengers and providers; and
- meeting sustainable design objectives.

The implementation of Phase 3 would be dependent on the availability of funding allocations.

The ultimate SITF in Phase 3 would include a new terminal building to accommodate projected service providers and passengers. The approximate sizes of the terminal improvements are shown in Table 1-1, which provides the program space needs and approximate square footages for a typical intermodal facility plan, as proposed by the current transit operators at the Station. The joint development square footage ranges from 27,000 to 73,000 square feet.

Table 1-1. Assumptions for the SITF Terminal Program

Program Use	Square Footage
Ticketing	2,660
Baggage	5,758
Waiting area	25,146
Passenger amenities	10,553
Administration and employee uses	60,632
Joint development	22,762
Total	127,511

Source: SMWM/Arup and Associated Consultants 2004.

1.2 Purpose and Need

1.2.1 Purpose

The proposed project is a mass transportation project and is intended to enhance and upgrade existing mass transit facilities as well as provide new transit facilities, thereby meeting existing and projected future user and provider needs and facilitating multiple forms of transportation modes, including rail, transit, pedestrian, and bicycle. The project also would help to decrease the Sacramento region's reliance on automobiles and remove traffic from the interstate and highway system, as well as accommodating a future high-speed-rail project, which may be developed by the state.

Specifically, the City intends to accomplish the improvements listed below.

1.2.1.1 Rail and Transit Service

The City intends to:

- improve capacity and reliability for freight and passenger rail service,
- reduce rail and passenger conflicts and improve safety,
- provide improved connectivity and ease of use for transit and rail users and providers,
- accommodate future expansion of rail and bus services by providers that currently operate at the existing Depot and potential new users and providers,
- increase local and regional transit use by bringing together disconnected elements of the transit network into a single regional hub, and
- meet projected service levels and passenger growth.

1.2.1.2 Road and Highway System

The City intends to help to decrease the Sacramento region's reliance on automobiles and remove traffic from the interstate and highway system. Although the City does not propose physical improvements to the state or federal highway system or the local roads as part of the



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Source: Tran Systems 2008.

Figure 1-3
Project Composite

proposed project, improving rail and transit service would provide alternative modes of transportation to the Sacramento region.

1.2.2 Need

There have been five train terminals at various locations in downtown Sacramento, beginning with the first Central Pacific Railroad terminal built in 1879 and culminating with the current Depot built in 1925, which is the only facility in Sacramento remaining in regular passenger service. As originally built, the Depot had a direct relationship to the main civic corridor of I Street, connecting arriving and departing passengers directly to the downtown core via 4th and I Streets. This connection has been compromised in a number of ways, including by construction of the Interstate 5 (I-5) on-ramp and the installation of heavy landscaping. Pedestrians wishing to access the Depot must navigate a heavily trafficked intersection and walk through several parking lots to reach the Depot's main entrance.

Currently, the Depot houses the Sacramento Amtrak station; operations for interstate passenger rail service and the Capitol Corridor and San Joaquin Corridor intercity services; the existing UPRR freight rail lines, passenger platforms, and tunnel; RT's LRT line and station; bus loading areas for multiple service providers; and passenger parking. The Depot and all of its associated facilities are known as the Sacramento Valley Station (Station). The use of the Depot has increased substantially over the past several years with the addition of Capitol Corridor trains to meet the increasing commuter demand between the San Francisco Bay Area (Bay Area) and Sacramento and the addition of the LRT. The existing Depot facilities are undersized and deficient in ticketing, baggage handling, administrative areas, the number of berths for buses, and passenger amenities (such as food and services purveyors).

The UPRR mainline tracks located directly north of the Depot are shared by the Capitol Corridor intercity rail service, which operates passenger service between the Bay Area and Auburn; the Amtrak transcontinental passenger service; and the San Joaquin Corridor rail service, which operates between Sacramento and Bakersfield. The existing track configuration substantially reduces the velocity at which freight trains can pass through the area. Freight trains are also delayed ("held out") to wait for passenger trains at the Station to load and unload passengers.

The proposed project is needed for the following reasons.

1.2.2.1 Rail and Transit Service

- The current alignment of the UPRR track between 2nd Street and 7th Street does not meet the operational capacity requirements of the freight and passenger operators. As noted above, the UPRR mainline tracks are shared by the Capitol Corridor intercity rail service, which operates passenger service between the Bay Area and Auburn; the Amtrak transcontinental passenger service; and the San Joaquin Corridor rail service, which operates between Sacramento and Bakersfield. The existing track configuration substantially reduces the velocity at which freight trains can pass through the area and limits the maximum length of the trains, thereby reducing capacity. Freight trains are also

delayed (“held out”) to wait for passenger trains at the station to load and unload passengers.

- The configuration of the LRT tracks immediately behind the Depot is not optimal for bus, vehicle, and pedestrian access and safety.
- The current configuration of the LRT station and bus areas limits the ability of the site to accommodate additional transit providers.
- The existing Depot facilities are undersized and deficient in ticketing, baggage handling, administrative areas, the number of berths for buses, and passenger amenities (such as food and services purveyors).
- The existing demand for parking at the Depot exceeds the available supply.
- The existing baggage tunnel that extends from the north side of the Depot to the existing tracks is not compliant with the Americans with Disabilities Act (ADA). It cannot accommodate baggage carts with more than two trailers because of the 90-degree turns required to move between the tunnel and the ramps to the platforms. This requires multiple runs of cars for many Amtrak trains in the short time they stop at the Station.
- An all-weather and well-lighted pathway, including for the use of passenger carts and Red-Cap Service for mobility-impaired passengers, is needed to provide for passenger safety and convenience.

1.2.2.2 Road and Highway System

Many of the Sacramento area freeway mainline study segments operate at unacceptable levels of service during peak periods, and many segments are near capacity. During congested conditions, drivers must divert to other routes, and fewer vehicles are able to get through than the actual demand would otherwise indicate, resulting in lower traffic counts and higher levels of service than are typically observed. (PBS&J/EIP 2007.)

1.3 Summary of Consultation to Date

ICF Jones & Stokes biologist John Howe obtained a list of all federal proposed and listed endangered and threatened species that could occur in the vicinity of the proposed project from the U.S. Fish and Wildlife Service (USFWS) website (http://www.sacramento.fws.gov/es/spp_list) on December 1, 2008. The list is presented in Appendix A.

On December 19, 2008, a field meeting was attended by ICF Jones & Stokes staff members Beth Eggerts, John Howe, and Will Kohn; Caltrans Environmental Coordinator Laura Walsh; Caltrans biologist Suzanne Melim; FHWA environmental specialist Larry Vinzant; and USFWS biologist Rocky Montgomery to review the proposed project’s impacts on habitat for the federally threatened valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*).

1.4 Document Preparation History

Potential biological resource issues associated with the proposed project were identified through a review of existing information, discussions with Caltrans, obtaining species lists from the California Natural Diversity Database (CNDDDB) and the USFWS website, and field surveys. Because the proposed project is likely to adversely affect VELB, Ms. Walsh, Ms. Melim, Mr. Vinzant, and Mr. Montgomery determined during the December 19 field visit that a BA would need to be prepared for the proposed project.

Those contributing to the preparation of this document include:

- Contractor : ICF Jones & Stokes, 630 K Street, Suite 400, Sacramento, CA 95814. Personnel: Vicki Axiaq, Elizabeth Eggerts, John Howe, and Sarah Sol.
- Agency: Caltrans, District 3, 703 B Street, Marysville, CA 95901. Personnel: Laura Walsh and Suzanne Melim.

In addition to the natural environment study for the proposed project, the environmental impact report prepared for the larger RSP (PBS&J/EIP 2007) was reviewed for information that pertains to federally listed species.

Chapter 2 Study Methods

2.1 Listed and Proposed Species Potentially Occurring in the Biological Study Area

The USFWS has provided a list of species that are listed as threatened or endangered under the federal Endangered Species Act (ESA), or are proposed or candidates for such listing, and could occur in the U.S. Geological Survey (USGS) 7.5-minute Sacramento West quadrangle. The list is dated December 1, 2008, and provided in Appendix A. Table 2-1 provides the legal status, distribution, habitat requirements, and likelihood of occurrence in the study area for each of these species identified on the USFWS list (Appendix A).

Table 2-1. Listed and Proposed Wildlife Species Potentially Occurring in or near the Study Area

Common and Scientific Name	Legal Status ^a	California Distribution	General Habitat and Species Description	Habitat ^b Present or Absent	Rationale
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	E	Central Valley; central and south Coast Ranges from Tehama County to Santa Barbara County; isolated populations also in Riverside County	Common in vernal pools; also found in sandstone rock outcrop pools	Absent	No suitable habitat (vernal pools) exists within the biological study area
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	Riparian and oak woodland habitats below 3,000 feet throughout the Central Valley and surrounding foothills	Riparian and oak savanna habitats with elderberry shrubs, which are the host plant	Present	Four elderberry shrubs were identified within the biological study area; the species is known to occur at several locations along the Sacramento and American Rivers
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	E	Central Valley and the Sacramento River Delta	Vernal pools and ephemeral stock ponds	Absent	No suitable habitat (vernal pools or ephemeral stock ponds) exists within the biological study area
Green sturgeon <i>Acipenser medirostris</i>	T	Known to spawn in the Sacramento River and Klamath River Basin	An anadromous fish that spawns in deep pools or "holes" in large, turbulent freshwater river mainstems; during early life stages, may remain in fresh water for up to 2 years	Absent	No suitable habitat exists within the biological study area; though the Sacramento River is in the vicinity of the project area, the proposed project would not result in direct or indirect impacts on the river

Common and Scientific Name	Legal Status ^a	California Distribution	General Habitat and Species Description	Habitat ^b Present or Absent	Rationale
Delta smelt <i>Hypomesus transpacificus</i>	T	Found only from Suisun Bay to areas upstream through the Sacramento River Delta in Contra Costa, San Joaquin, Sacramento, Solano, and Yolo Counties	Found in euryhaline waters of the Delta; spawn in tidally influenced backwater sloughs and channel edge waters	Absent	No suitable habitat exists within the biological study area; this species occurs in the Delta
Central Valley steelhead <i>Oncorhynchus mykiss</i>	T	Sacramento and San Joaquin Rivers and their tributaries	An anadromous fish that spawns and spends a portion of its life in inland streams, typically maturing in the open ocean	Absent	No suitable habitat exists within the biological study area; though the Sacramento River is in the vicinity of the project area, the proposed project would not result in direct or indirect impacts on the river
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	T	Sacramento and San Joaquin Rivers and their tributaries	An anadromous fish that spawns and spends a portion of its life in inland streams, typically maturing in the open ocean	Absent	No suitable habitat exists within the biological study area; though the Sacramento River is in the vicinity of the project area, the proposed project would not result in direct or indirect impacts on the river
Sacramento River winter-run Chinook salmon, <i>Oncorhynchus tshawytscha</i>	E	Sacramento River and its tributaries	An anadromous fish that spawns and spends a portion of its life in inland streams, typically maturing in the open ocean	Absent	No suitable habitat exists within the biological study area; though the Sacramento River is in the vicinity of the project area, the proposed project would not result in direct or indirect impacts on the river
California tiger salamander <i>Ambystoma californiense</i>	T	In the Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet and in the coastal region, from Sonoma County south to Santa Barbara County, up to approximately 3,000 feet	Small ponds, lakes, or vernal pools in grasslands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for adults	Absent	No suitable habitat exists within the biological study area

Common and Scientific Name	Legal Status ^a	California Distribution	General Habitat and Species Description	Habitat ^b Present or Absent	Rationale
California red-legged frog <i>Rana aurora draytonii</i>	T	Historic range extended along the coast from the vicinity of Point Reyes National Seashore in Marin County and inland from Shasta County south to Baja California; current known distribution is along the coast from Marin County south to Los Angeles County (with inland populations in San Bernardino and Riverside Counties), along the inner Coast Range from Tehama County south to eastern San Luis Obispo County, and in the Sierra Nevada from Butte County south to Tuolumne County	Permanent and semi-permanent aquatic habitats, such as creeks and coldwater ponds, with emergent and submergent vegetation and riparian species along the edges; may estivate in rodent burrows or cracks during dry periods	Absent	No suitable habitat exists within the biological study area, and the study area is outside of the known range for this species
Giant garter snake <i>Thamnophis gigas</i>	T	Central Valley from Fresno north to the Gridley/Sutter Buttes area; has been extirpated from areas south of Fresno	Sloughs, canals, and other small waterways where there is a prey base of small fish and amphibians; requires grassy banks and emergent vegetation for basking and areas of high ground that are protected from flooding during winter	Absent	Habitat within the biological study area is not suitable; the drainage ditches are mostly dry during the spring, summer, and fall; a few small areas in the ditches are saturated due to irrigation runoff that collects there during these time periods; these ditches are not connected to any other habitat that would be considered suitable for giant garter snake

Notes:

^a Status explanations:

E = listed as endangered under the federal Endangered Species Act.

T = listed as threatened under the federal Endangered Species Act.

^b Absent means no further work is needed. Present means general habitat is present and that the species may be present.

2.2 Studies Required

Potential biological resource issues associated with the proposed project were identified through a review of existing information and reconnaissance-level field surveys. Based on the information gathered, ICF Jones & Stokes biologist John Howe determined, through coordination with Caltrans, that a general habitat evaluation was required to determine whether there is suitable habitat in the study area for sensitive species (including species listed or proposed for listing under the federal ESA). This BA fulfills the requirement for the habitat evaluation.

The following information was reviewed during preparation of this BA.

- a CNDDDB records search of the USGS 7.5-minute Sacramento West, Sacramento East, Rio Linda, Taylor Monument, Grays Bend, Davis, Clarksburg, Saxon, and Florin quadrangles (Appendix B).
- USFWS lists of endangered, threatened, and proposed species for the USGS 7.5-minute Sacramento West quadrangle obtained from the USFWS website (Appendix A).

2.3 Personnel and Survey Dates

Biological surveys were conducted on May 22, 2008, and December 12 and 19, 2008, by Mr. Howe of ICF Jones & Stokes (see Table 2-2 for specific dates). The methods and personnel involved with documenting the plant, wildlife, and fish species listed or proposed for listing under the federal ESA are described below.

Table 2-2. Biological Survey Dates

Survey Date	Survey Purpose
May 22, 2008	Reconnaissance-level survey of the study area
December 12, 2008	VELB survey
December 19, 2008	Field visit with Caltrans, FHWA, and USFWS personnel

To assess existing conditions, Mr. Howe of ICF Jones & Stokes conducted a reconnaissance-level survey of the biological study area on May 22, 2008. During this survey, the biologist noted each habitat type present and evaluated it for its potential to support species that are listed under the federal ESA. The biologist also conducted a VELB survey on December 12, 2008, to identify and map all elderberry shrubs within the study area. The survey methods followed the requirements of the USFWS's *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*, dated July 9, 1999. The entire study area was walked and searched for elderberry shrubs. All elderberry shrubs found within the study area were mapped using Global Positioning System (GPS) technology. The biologist conducted stem counts of elderberry shrubs growing within 30.5 meters (100 feet) of the project area and recorded all stem diameters measuring at least 2.5 centimeters (1 inch) in diameter at ground level.

2.4 Agency Coordination and Professional Contacts

During preparation of this document, ICF Jones & Stokes coordinated with the federal and state agencies listed below.

2.4.1 U.S. Fish and Wildlife Service

ICF Jones & Stokes biologists originally obtained a list of all species listed or proposed for listing as endangered or threatened species under the federal ESA that could occur in the vicinity of the proposed project from the USFWS website on December 1, 2008. This list is presented in Appendix A.

2.4.2 California Department of Transportation

Coordination with Caltrans environmental coordinator Laura Walsh and biologist Suzanne Melim was initiated for the preparation of this document.

2.5 Limitations That May Influence Results

No limitations that would influence the results of this BA were encountered.

Chapter 3 Results: Environmental Setting

3.1 Description of the Existing Biological and Physical Conditions

3.1.1 Study Area

The project site lies within the Central Business District of the downtown area of Sacramento and within the RSP area, just south of the historic SPRR Sacramento Shops complex (the remnants of which are known as the Central Shops buildings). The project site is generally bounded by I Street on the south, 2nd Street and the Sacramento River riverfront on the west, 7th Street on the east, and the Central Shops buildings on the north (Figure 1-2). The site includes the historic Depot, which currently houses the Sacramento Amtrak station; operations for interstate passenger rail service and the Capitol Corridor and San Joaquin Corridor intercity services; the existing UPRR freight rail lines, passenger platforms, and tunnel; RT's LRT line and station; bus loading areas for multiple service providers; and associated passenger parking. The Depot and all of its associated facilities are known as the Station. The privately owned REA building is located immediately adjacent to the project site (near the Depot) but is not part of the existing Station or proposed project.

The proposed project site consists of approximately 33 acres, including the existing Station facilities that are owned by the City. The City is in the process of acquiring additional land immediately north of the Station for the proposed project. The area to be acquired also contains the approximately 3,300-foot-long UPRR rail corridor (current alignment and proposed realignment) between the Sacramento River and 7th Street.

The biological study area includes the project area and a 30.48-meter-wide (100-foot-wide) buffer (Figure 3-1). This 30.48-meter-wide (100-foot-wide) buffer was added to include sensitive biological resources adjacent to the construction zone that could be indirectly affected by the proposed project (e.g., elderberry shrubs [*Sambucus mexicana*] that provide habitat for VELB).

3.1.2 Physical Conditions

The biological study area has been extensively disturbed by past and ongoing transportation, commercial, and industrial activities, as well as soil remediation work. Because of this, the majority of the biological study area warrants a land cover classification of *vacant*. The vacant classification includes areas that support ruderal, weedy vegetation; bare earth; and hardscape. Most of the vegetation in the biological study area consists of introduced or ruderal plant species and appears to be in a constant state of disturbance and thus changes from year to year. The biological study area occurs at elevations ranging from 6.1 to 9.1 meters (20 to 30 feet) above mean sea level. The biological study area can be found on the USGS 7.5-minute Sacramento West quadrangle in portions of Sections 35 and 36, Township 9 North, Range 4 East.

The soil underlying the biological study area consists of deposits of silt and sand. This extends from the surface to a depth of 9.1 to 15.2 meters (30 to 50 feet) and includes fill placed over the area during the past 130 years.

3.1.3 Biological Conditions in the Study Area

As mentioned above, the vacant land is dominated by ruderal plant species. The dominant plant species within this area include wild oat (*Avena* sp.), riggut brome (*Bromus diandrus*), yellow starthistle (*Centaurea solstitialis*), mustard (*Brassica* spp.), vetch (*Vicia* sp.), bindweed (*Convolvulus arvensis*), milk thistle (*Silybum marianum*), and tarweed (*Holocarpha* sp.). There also are scattered trees throughout the biological study area, including individual cottonwoods (*Populus fremontii*) and tree of heaven (*Ailanthus altissima*). Many of these trees are relatively small, multi-trunked resprouts. One elderberry shrub was observed along the eastern boundary of the project area. This shrub is an apparent resprout that was removed during site remediation under a renewable take permit issued by the USFWS for the Railyards Remediation Project (Federal Permit No. TE023739). Three more shrubs were identified outside the project site but within the biological study area, just east of the existing track location, in a landscaped area adjacent to a parking lot.

The biological study area is just east of the Sacramento River and approximately 1.6 kilometers (1 mile) south of the American River Parkway. Many species of wildlife that nest or den in vegetation along the rivers forage within the biological study area. Because of its proximity to the local river corridor, the biological study area provides somewhat greater wildlife habitat values than typical vacant urban land.

The biological study area primarily supports common birds and mammals. Wildlife species that were observed or are expected to occur in the biological study area are western scrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), yellow-billed magpie (*Pica nuttalli*), house finch (*Carpodacus mexicanus*), house mouse (*Mus musculus*), black rat (*Ratus ratus*), house cat (*Felis catus*), black-tailed jackrabbit (*Lepus californicus*), raccoon (*Procyon lotor*), and skunk (*Mephitis mephitis*).

3.1.4 Invasive Plant Species

Invasive plant species include species designated on the federal level as noxious weeds by the U.S. Department of Agriculture (USDA), species listed by the California Department of Food and Agriculture (CDFA), and other invasive plants designated by the California Invasive Plant Council (Cal-IPC). Road, highway, and related construction projects are some of the principal dispersal pathways for invasive plant species and their seeds. The introduction and spread of invasive plants adversely affect natural plant communities by displacing native plant species that provide shelter and forage for wildlife species. A national invasive weed list has not been approved yet, but the FHWA requires state departments of transportation to use the state's noxious weed list (California Department of Food and Agriculture 2008) in the interim.



Graphics... 00121.08 (NES).tm

Figure 3-1
Biological Study Area

As identified above, the site consists of mostly ruderal vegetation. Of the plant species identified during previous surveys of the study area (PBS&J/EIP 2007), 11 are listed as invasive species in the *California Invasive Plant Inventory* (California Invasive Plant Council 2006). One of these species, yellow starthistle, has a rating of “high,” which means that it has severe ecological impacts on physical processes, plant and animal communities, and vegetation structure (California Invasive Plant Council 2006). Five of these species, tree of heaven, ripgut brome, Bermuda grass (*Cynodon dactylon*), eucalyptus (*Eucalyptus* sp.), and edible fig (*Ficus carica*), have a rating of “moderate,” which means that these species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure (California Invasive Plant Council 2006). The remaining five species, field mustard (*Brassica rapa*), red-stemmed filaree (*Erodium cicutarium*), rabbit’s foot grass (*Polypogon monspeliensis*), wild radish (*Raphanus sativus*), and milk thistle, have a rating of “limited,” which means these species are invasive but that their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. The reconnaissance-level survey conducted on May 22, 2008, did not involve a botanical survey; however many of the species listed above were observed during the meandering transects conducted across the biological study area.

3.1.5 Migration and Travel Corridors

No migration or travel corridors for wildlife occur within the biological study area.

Chapter 4 Results: Biological Resources, Discussion of Impacts, and Mitigation

4.1 Plant Species Listed/Proposed under the Federal Endangered Species Act

No plant species listed under the federal ESA were identified by the USFWS list as potentially occurring in the USGS 7.5-minute Sacramento West quadrangle. A review of the CNDDDB revealed seven listed plant species occurring within the region: succulent owl's clover (*Castilleja campestris* ssp. *succulenta*), palmate-bracted bird's-beak (*Cordylanthus palmatus*), Colusa grass (*Neostapfia colusana*), Antioch Dunes evening-primrose (*Oenothera deltooides* ssp. *howellii*), slender Orcutt grass (*Orcuttia tenuis*), Sacramento Orcutt grass (*Orcuttia viscida*), and Crampton's tuctoria (*Tuctoria mucronata*). The ICF Jones & Stokes biologist concluded that the study area does not meet the habitat or microhabitat requirements (e.g., vernal pools, alkali grasslands, sand dunes) of any of these species. Therefore, plant species listed under the federal ESA are unlikely to occur in the study area.

4.2 Occurrences of Animal Species Listed/Proposed under the Federal Endangered Species Act

Species distribution and habitat suitability requirements indicate that 10 of the species on the USFWS list do not occur in the study area (Appendix A). One listed wildlife species, VELB, was identified as having the potential to occur in the study area. This species is discussed below.

4.2.1 Valley Elderberry Longhorn Beetle

VELB is listed under the federal ESA as a threatened species. Critical habitat was designated by the USFWS on August 8, 1980 (45 Federal Register [FR] 52803). On October 2, 2006, the USFWS proposed removing VELB from the endangered species list; however, the species will remain listed until a final determination is made. The biological study area is not located within critical habitat for VELB.

VELB is closely associated with elderberry shrubs (*Sambucus* spp.), an obligate host for beetle larvae. It is a hardy shrub that grows successfully in a variety of riparian habitat types. Where there is a source of water, elderberry shrubs grow in nonriparian habitats. However, most VELB occurrences are known from elderberry shrubs in or adjacent to riparian communities.

VELB's life history is assumed to follow a sequence of events similar to those of related taxa. Adult VELB live for a few days to a few weeks between mid-March and mid-May (Talley et al. 2006). Adults feed on elderberry leaves and mate within the canopy. Female beetles deposit eggs

on the surface of leaves or in crevices of bark or stem/petiole junctions (Talley et al. 2006). Eggs hatch within a few days, and the larvae soon after bore to the center of the elderberry stem, where they create a feeding gallery in the pith at the center of the stem. When larvae are ready to pupate, they move through the pith of the plant, open an emergence hole through the bark, and return to the pith for pupation. Adults exit through the emergence holes and sometimes can be found on elderberry foliage, flowers, or stems or on adjacent vegetation. The entire life cycle of VELB is thought to encompass 2 years from the time eggs are laid and hatch to the time adults emerge and die (U.S. Fish and Wildlife Service 1984).

The presence of exit holes in elderberry stems indicates previous use by VELB. Exit holes are circular to oval and range in size from 4 to 10 millimeters (0.16 to 0.39 inch) in diameter. Exit holes can be found on stems that are 25 to 203 millimeters (1 to 8 inches) in diameter. On the stems, holes may be located from a few millimeters (inches) above the ground to about 2.74 to 3.05 meters (9 to 10 feet) above the ground (Barr 1991).

4.2.1.1 Survey Results

Four elderberry shrubs were identified within the biological study area (Figure 3-1). These shrubs were identified within nonriparian habitat and appear to be volunteers among mostly nonnative landscape vegetation, but some native vegetation, consisting of oaks, cottonwoods, and willows, does occur in these areas. Only one of the shrubs observed had exit holes. Table 4-1 summarizes the results of the elderberry shrub survey.

There are no CNDDDB records of VELB occurring within the biological study area. However, there are numerous CNDDDB records for VELB along the Sacramento and American Rivers. The nearest recorded occurrence is than 0.40 kilometer (0.25 mile) from the biological study area.

Table 4-1. Results of Elderberry Shrub Survey

Shrub/Shrub Group Number	Stem Diameter Class at Ground Level in Centimeters (inches)			Shrub Height in Meters (feet)	Exit Holes Present?	Shrub in Riparian Habitat?	Shrub Effects
	2.5–7.6 (1–3)	7.6–12.7 (3–5)	>12.7 (>5)				
1	2	1	0	2.4 (8)	No	No	Direct
2	0	0	1	4.6 (15)	No	No	Direct
3	0	0	1	3.7 (12)	No	No	Indirect
4	1	0	1	4.3 (14)	Yes	No	Direct

4.2.1.2 Critical Habitat

According to the recovery plan for VELB (U.S. Fish and Wildlife Service 1984), the study area does not encompass areas designated as critical or essential habitat for VELB. Critical habitat occurs approximately 3.2 kilometers (2 miles) east of the study area.

4.2.1.3 Avoidance and Minimization Efforts

Implementation of the following measures would avoid or minimize impacts on VELB that may occur in elderberry shrubs not directly affected by project construction. These measures are from the USFWS *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*, dated July 9, 1999.

Mitigation Measure BIO-1: Establish a 6.1-Meter-Wide (20-Foot-Wide) Buffer (Minimum) around All Elderberry Shrubs Where Feasible

Before any ground-disturbing activity, the City will ensure that a temporary plastic mesh-type construction fence (Tensor Polygrid or equivalent), a minimum of 1.2 meters (4 feet) tall, is installed at least 6.1 meters (20 feet) from the driplines of elderberry shrubs adjacent to the study area that will be retained. The intent of requiring this fencing is to prevent encroachment by construction vehicles and personnel. The exact location of the fencing will be determined by a qualified biologist, with the goal of protecting habitat for VELB. The fencing will be strung tightly on posts set at a maximum interval of 3.0 meters (10 feet). The fencing will be installed in a way that prevents equipment from enlarging the work area beyond the delineated area. The fencing will be checked and maintained weekly until all construction is completed. This buffer zone will be marked by signs stating, "This is habitat of the valley elderberry longhorn beetle, a threatened species, and it must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." Signs will be placed at intervals of 15.2 meters (50 feet) and must be readable at a distance of 6.1 meters (20 feet). No construction activity, including grading, will be allowed until this condition is satisfied. No grading, clearing, storing of equipment or machinery, or other disturbance or activity may occur until a representative of the City has inspected and approved all temporary construction fencing. The fencing and a note reflecting this condition will be shown on the construction plans.

Mitigation Measure BIO-2: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel

Before any work occurs in the project area, including grading, a qualified wildlife biologist will conduct mandatory contractor/worker awareness training for construction personnel. The training will be provided to all construction personnel to brief them on the need to avoid impacts on biological resources and the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the project, the contractor's superintendent will ensure they receive the mandatory training before starting work. An environmental awareness handout that describes and illustrates sensitive resources (i.e., nesting birds and raptors, elderberry shrubs, and native trees) that will be avoided during project construction, and that identifies all relevant permit conditions, will be provided to each person.

Mitigation Measure BIO-3: Implement Dust Control Measures

The City will ensure that dust control measures are implemented for all ground-disturbing activities in the project area. These measures may include applying water to graded and disturbed

areas that are unvegetated. To avoid attracting Argentine ants (*Linepithema humile*), water will not be sprayed within the driplines of elderberry shrubs at any time.

4.2.1.4 Project Effects

Effects on elderberry shrubs were determined using geographic information system (GIS) technology to overlay the locations of elderberry shrubs on a map that depicts the project footprint. VELB habitat was considered to be directly affected if project construction would require the removal of the shrub or if ground-disturbing activities would occur within 6.1 meters (20 feet) of the dripline of the shrub. The species was considered indirectly affected if project construction would disturb the ground between 6.1 and 30.5 meters (20 and 100 feet) of an elderberry shrub.

Direct Effects

As defined under the ESA, direct effects are caused by the proposed project and occur at the time of the project. The area of direct effect within the study area consists of the permanent impact area shown in Figure 3-1. As identified in Table 4-1, above, the proposed project would result in direct effects on three shrubs.

Indirect Effects

As defined under the ESA, indirect effects are those caused by the proposed project. They occur later in time but are reasonably certain to occur. Possible indirect effects on VELB with the potential to occur in the study area include:

- increased dust accumulation on shrubs from ground-disturbing activities,
- changes in hydrology around shrubs, and the removal of associated woodland species, which could result in the subsequent death of the shrub and a loss of VELB habitat.

As identified in Table 4-1, above, the proposed project would potentially result in indirect impacts on one shrub (No. 3). The only likely potential indirect effect would be due to dust accumulation on the shrub. Dust control measures identified in *Mitigation Measure BIO-3* would minimize this potential impact. Track removal activities would not result in altered hydrology in the vicinity of the shrub since no grading activity that will alter the volume or direction of runoff will occur within 100 feet of the shrub. No associated woodland species will be removed in the vicinity of this shrub as part of the proposed project.

4.2.1.5 Compensatory Mitigation

Pursuant to the USFWS *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*, the City will implement the measures listed below to mitigate direct and indirect impacts on VELB.

Mitigation Measure BIO-4: Transplant Directly Affected Elderberry Shrubs

All shrubs that are directly affected by the proposed project will be transplanted to a USFWS-approved conservation area (Shrub Nos. 1, 2, and 4).

Elderberry shrubs will be transplanted when the plants are dormant, from approximately November through the first 2 weeks of February, and they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. The City will follow the specific transplanting guidance provided in the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*.

Mitigation Measure BIO-5: Compensate for Direct Impacts on Elderberry Shrubs

The City will mitigate impacts on the shrubs by purchasing mitigation credits at a USFWS-approved mitigation bank. Mitigation will be done according to the measures outlined in Table 1 of the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. A summary of the required mitigation is presented below in Table 4-2. As shown in this table, the proposed project would require 15 elderberry seedlings and 23 associated native plants to be planted at a USFWS-approved mitigation bank. Currently, VELB mitigation credits are available at River Ranch Conservation Bank. The service areas of these conservation banks include the biological study area. Any shrubs identified for transplant will be transplanted to one of these mitigation banks.

Table 4-2. Compensation for Direct Impacts on VELB Habitat

Location	Stem Diameter Class at Ground Level in Centimeters (inches)	Exit Holes?	Elderberry Seedling Ratio	Associated Native Plant Ratio (ratio of associated natives to elderberry seedlings)	Stem Count	Total Elderberry/ Associated Natives to Be Planted
Nonriparian	2.5–7.6 (1–3)	No	1:1	1:1	2	4/6
		Yes	2:1	2:1	1	
Nonriparian	7.6–12.7 (3–5)	No	2:1	1:1	1	2/2
		Yes	4:1	2:1	0	
Nonriparian	>12.7 (>5)	No	3:1	1:1	1	9/15
		Yes	6:1	2:1	1	
Riparian	2.5–7.6 (1–3)	No	2:1	1:1	0	0/0
		Yes	4:1	2:1	0	
Riparian	7.6–12.7 (3–5)	No	3:1	1:1	0	0/0
		Yes	6:1	2:1	0	
Riparian	>12.7 (>5)	No	4:1	1:1	0	0/0
		Yes	8:1	2:1	0	
Total	N/A	N/A	N/A	N/A	6	15/23

N/A = not applicable.

4.2.1.6 Modifications to the Project to Mitigate Effects

No modifications to the project to mitigate effects were identified.

4.2.1.7 Cumulative Effects

Cumulative effects under the ESA include all future non-federal actions “reasonably certain to occur” in the project area. Future federal actions that are unrelated to the proposed project are not considered in the cumulative effects analysis because these actions would require separate consultation pursuant to Section 7 of the ESA.

In addition to the direct loss of VELB habitat in the study area, the project would contribute incrementally to Sacramento County and statewide cumulative impacts on VELB. Additional projects proposed by the City have the potential to affect VELB habitat. For example, the project to make improvements to access from the Railyards to Richards Boulevard and I-5 would result in direct impacts on five elderberry shrubs and indirect impacts on seven other elderberry shrubs. Formal consultation for that project has not been initiated yet.

Chapter 5 Conclusions and Determination

5.1 Conclusions

A total of four elderberry shrubs with stems measuring at least 2.5 centimeters (1.0 inch) in diameter at ground level were identified within or adjacent to the study area. These shrubs provide potential habitat for VELB, a species listed as threatened under the federal ESA. All of these shrubs occur within 30.5 meters (100 feet) of proposed construction and could be directly or indirectly affected by the proposed project. Three of the four shrubs would be directly affected (construction within 6.1 meters [20 feet]) by the proposed project.

5.2 Determination

The proposed project would directly affect elderberry shrubs that provide habitat for VELB. Therefore, the proposed project is likely to affect VELB adversely.

The proposed project would result in direct impacts on three shrubs. The proposed project would result in indirect impacts on one shrub. The City will compensate for direct effects on VELB habitat by transplanting directly affected shrubs and planting 15 elderberry seedlings and 23 associated native plants. Mitigation would be achieved at River Ranch Conservation Bank.

Avoidance and minimization measures are identified in this BA and would be implemented as part of the proposed project to reduce indirect effects. This take authorization would be obtained during Section 7 consultation between the USFWS and the FHWA. This project will be appended to the existing programmatic agreement between the USFWS and the FHWA.

Chapter 6 References Cited

6.1 Printed References

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Appendix A U.S. Fish and Wildlife Service
Endangered and Threatened
Species List

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 081201104257

Database Last Updated: September 11, 2008

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Lepidurus packardii

vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris

green sturgeon (T) (NMFS)

Hypomesus transpacificus

Critical habitat, delta smelt (X)

delta smelt (T)

Oncorhynchus mykiss

Central Valley steelhead (T) (NMFS)

Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha

Central Valley spring-run chinook salmon (T) (NMFS)

Critical Habitat, Central Valley spring-run chinook (X) (NMFS)

Critical habitat, winter-run chinook salmon (X) (NMFS)

winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

Rana aurora draytonii

California red-legged frog (T)

Reptiles

Thamnophis gigas

giant garter snake (T)

Quads Containing Listed, Proposed or Candidate Species:

SACRAMENTO WEST (513D)

County Lists

No county species lists requested.

Key:

- (E) *Endangered* - Listed as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.
- Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of

1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These

lists provide essential information for land management planning and conservation efforts.
[More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be March 01, 2009.

Appendix B California Natural Diversity
Database Species List

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait
Sacramento West and Surrounding Eight Quadrangles

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 <i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040			G5	S3	
2 <i>Actinemys marmorata</i> western pond turtle	ARAAD02030			G3G4	S3	SC
3 <i>Actinemys marmorata marmorata</i> northwestern pond turtle	ARAAD02031			G3G4T3	S3	SC
4 <i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020			G2G3	S2	SC
5 <i>Ammodramus savannarum</i> grasshopper sparrow	ABPBXA0020			G5	S2	SC
6 <i>Antrozous pallidus</i> pallid bat	AMACC10010			G5	S3	SC
7 <i>Archoplites interruptus</i> Sacramento perch	AFCQB07010			G3	S1	SC
8 <i>Ardea alba</i> great egret	ABNGA04040			G5	S4	
9 <i>Ardea herodias</i> great blue heron	ABNGA04010			G5	S4	
10 <i>Astragalus tener var. ferrisiae</i> Ferris' milk-vetch	PDFAB0F8R3			G1T1	S1.1	1B.1
11 <i>Astragalus tener var. tener</i> alkali milk-vetch	PDFAB0F8R1			G1T1	S1.1	1B.2
12 <i>Athene cunicularia</i> burrowing owl	ABNSB10010			G4	S2	SC
13 <i>Atriplex cordulata</i> heartscale	PDCHE040B0			G2?	S2.2?	1B.2
14 <i>Atriplex depressa</i> brittlescale	PDCHE042L0			G2Q	S2.2	1B.2
15 <i>Atriplex joaquiniana</i> San Joaquin spearscale	PDCHE041F3			G2	S2.1	1B.2
16 <i>Branchinecta conservatio</i> Conservancy fairy shrimp	ICBRA03010	Endangered		G1	S1	
17 <i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened		G3	S2S3	
18 <i>Branchinecta mesovallensis</i> midvalley fairy shrimp	ICBRA03150			G2	S2	
19 <i>Buteo regalis</i> ferruginous hawk	ABNKC19120			G4	S3S4	
20 <i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070		Threatened	G5	S2	
21 <i>Charadrius alexandrinus nivosus</i> western snowy plover	ABNNB03031	Threatened		G4T3	S2	SC
22 <i>Charadrius montanus</i> mountain plover	ABNNB03100			G2	S2?	SC
23 <i>Cicindela hirticollis abrupta</i> Sacramento Valley tiger beetle	IICOL02106			G5TH	SH	
24 <i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	ABNRB02022	Candidate	Endangered	G5T3Q	S1	

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25 <i>Cordylanthus palmatus</i> palmate-bracted bird's-beak	PDSCR0J0J0	Endangered	Endangered	G1	S1.1	1B.1
26 <i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened		G3T2	S2	
27 <i>Downingia pusilla</i> dwarf downingia	PDCAM060C0			G3	S3.1	2.2
28 <i>Egretta thula</i> snowy egret	ABNGA06030			G5	S4	
29 <i>Elanus leucurus</i> white-tailed kite	ABNKC06010			G5	S3	
30 <i>Elderberry Savanna</i>	CTT63440CA			G2	S2.1	
31 <i>Falco columbarius</i> merlin	ABNKD06030			G5	S3	
32 <i>Fritillaria agrestis</i> stinkbells	PMLIL0V010			G3	S3.2	4.2
33 <i>Gratiola heterosepala</i> Boggs Lake hedge-hyssop	PDSCR0R060		Endangered	G3	S3.1	1B.2
34 <i>Great Valley Cottonwood Riparian Forest</i>	CTT61410CA			G2	S2.1	
35 <i>Hibiscus lasiocarpus</i> woolly rose-mallow	PDMAL0H0Q0			G4	S2.2	2.2
36 <i>Juglans hindsii</i> Northern California black walnut	PDJUG02040			G1	S1.1	1B.1
37 <i>Lasionycteris noctivagans</i> silver-haired bat	AMACC02010			G5	S3S4	
38 <i>Lasiurus cinereus</i> hoary bat	AMACC05030			G5	S4?	
39 <i>Legenere limosa</i> legenere	PDCAM0C010			G2	S2.2	1B.1
40 <i>Lepidium latipes var. heckardii</i> Heckard's pepper-grass	PDBRA1M0K1			G4T1	S1.2	1B.2
41 <i>Lepidurus packardii</i> vernal pool tadpole shrimp	ICBRA10010	Endangered		G3	S2S3	
42 <i>Linderiella occidentalis</i> California linderiella	ICBRA06010			G3	S2S3	
43 <i>Myrmosula pacifica</i> Antioch multilid wasp	IIHYM15010			GH	SH	
44 <i>Navarretia leucocephala ssp. bakeri</i> Baker's navarretia	PDPLM0C0E1			G4T2	S2.1	1B.1
45 <i>Neostapfia colusana</i> Colusa grass	PMPOA4C010	Threatened	Endangered	G3	S3.1	1B.1
46 <i>Northern Claypan Vernal Pool</i>	CTT44120CA			G1	S1.1	
47 <i>Northern Hardpan Vernal Pool</i>	CTT44110CA			G3	S3.1	
48 <i>Nycticorax nycticorax</i> black-crowned night heron	ABNGA11010			G5	S3	
49 <i>Phalacrocorax auritus</i> double-crested cormorant	ABNFD01020			G5	S3	
50 <i>Plegadis chihi</i> white-faced ibis	ABNGE02020			G5	S1	

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Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
51 <i>Pogonichthys macrolepidotus</i> Sacramento splittail	AFCJB34020			G2	S2	SC
52 <i>Progne subis</i> purple martin	ABPAU01010			G5	S3	SC
53 <i>Riparia riparia</i> bank swallow	ABPAU08010		Threatened	G5	S2S3	
54 <i>Sagittaria sanfordii</i> Sanford's arrowhead	PMALI040Q0			G3	S3.2	1B.2
55 <i>Taxidea taxus</i> American badger	AMAJF04010			G5	S4	SC
56 <i>Thamnophis gigas</i> giant garter snake	ARADB36150	Threatened	Threatened	G2G3	S2S3	
57 <i>Tuctoria mucronata</i> Crampton's tuctoria or Solano grass	PMPOA6N020	Endangered	Endangered	G1	S1.1	1B.1
58 <i>Xanthocephalus xanthocephalus</i> yellow-headed blackbird	ABPBXB3010			G5	S3S4	SC