



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office

FEDERAL BUILDING, 2800 COTTAGE WAY, ROOM W-2605

SACRAMENTO, CA 95825

PHONE: (916)414-6600 FAX: (916)414-6713

Consultation Code: 08ESMF00-2016-SLI-1398

April 29, 2016

Event Code: 08ESMF00-2016-E-03019

Project Name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2)

of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Official Species List

Provided by:

Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Consultation Code: 08ESMF00-2016-SLI-1398

Event Code: 08ESMF00-2016-E-03019

Project Type: ** OTHER **

Project Name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Project Description: The site is comprised of two areas totaling approximately 24.2 acres that are separated from one another by North 12th Street. The larger and westernmost area is comprised of a single parcel, approximately 21 acres in size. It is generally bounded by Dos Rios Street to the west, Richards Boulevard to the northeast, Louise Street to the east, and North 12th Street to the south. The second and easternmost area is separated from the first by intervening parcels and North 12th Street. It is comprised of six parcels totaling approximately 3.2 acres.

The project is comprised of the following components: 1.) redevelop the Twin Rivers Community Housing Complex west of North 12th Street, 2.) construct the Twin Rivers Community Housing Expansion Area east of N 12th Street, and 3.) develop the new Dos Rios Light Rail Station on the eastern side of N 12th Street, adjacent to the expansion area.

The redevelopment of the existing housing complex and construction of the expansion area housing east of North 12th Street would take approximately seven years, beginning in 2017 with anticipated project completion in 2023. Acquisition, infrastructure availability, market conditions, demolition, and the timing of the new Dos Rios light rail station construction would have an impact on the phasing of physical development of the housing facilities. On the Twin Rivers Community Housing Expansion Area parcels, it is likely that the new light rail station would be constructed prior to the construction of the adjacent housing.

The project would be separated into phases to meet market conditions and also to potentially



United States Department of Interior
Fish and Wildlife Service

Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

facilitate efficient relocation of residents from existing units into new replacement housing as the existing units are demolished.

Physical construction of the housing facilities would occur in typical fashion, with demolition occurring first, followed by site preparation and grading, construction of roadways and utility improvements, and then construction of the housing units. Construction of the housing units would begin with the pouring of foundations, followed by framing and installation of rough electrical, plumbing, and heating, ventilation, and cooling (HVAC) components. Interior and exterior walls would be finished, followed by final fitting out of interior components and exterior landscaping.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Endangered Species Act Species List

There are a total of 8 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	Status	Has Critical Habitat	Condition(s)
California red-legged frog (<i>Rana draytonii</i>) Population: Entire	Threatened	Final designated	
California tiger Salamander (<i>Ambystoma californiense</i>) Population: U.S.A. (Central CA DPS)	Threatened	Final designated	
Crustaceans			
Vernal Pool fairy shrimp (<i>Branchinecta lynchi</i>) Population: Entire	Threatened	Final designated	
Vernal Pool tadpole shrimp (<i>Lepidurus packardii</i>) Population: Entire	Endangered	Final designated	
Fishes			
Delta smelt (<i>Hypomesus transpacificus</i>) Population: Entire	Threatened	Final designated	
steelhead (<i>Oncorhynchus (=salmo)</i>)	Threatened	Final designated	



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Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

<i>mykiss</i> Population: Northern California DPS			
Insects			
Valley Elderberry Longhorn beetle (<i>Desmocerus californicus dimorphus</i>) Population: Entire	Threatened	Final designated	
Reptiles			
Giant Garter snake (<i>Thamnophis gigas</i>) Population: Entire	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Kellie Berry
U.S. Fish and Wildlife Service
2800 Cottage Way, Rm W-2605
Sacramento, CA 95825

Dear Ms. Berry,

This is a request for formal consultation under Section 7 of the Endangered Species Act. The City of Sacramento is proposing to undertake an activity utilizing funds under the U.S. Department of Housing and Urban Development's (HUD) Choice Neighborhoods Initiative (CNI) program, and the City finds that this project may affect and is likely to adversely affect listed species or adversely modify designated critical habitat.

Authority

The City assumes consultation responsibility pursuant to HUD's regulations implementing NEPA, codified by HUD at 24 CFR Part 58, which govern the environmental review procedures for HUD-sponsored activities. The regulatory requirements at 24 CFR 58.4 require units of local governments (responsible entities – "RE's") to assume the responsibility for environmental review, decision-making, and actions that would otherwise apply to HUD under the provisions of NEPA and other provisions of law that further the purposes of NEPA. This includes Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

This procedure is endorsed in USFWS's memorandum entitled "Endangered Species Act Consultation Compliance with 'Responsible Entities' under U.S. Department of Housing and Urban Development's Assumption Authority (24 CFR Part 58)," signed April 17, 2002 and attached herewith. Pursuant to that memorandum, it is USFWS policy that responsible entities may assume responsibility for HUD's Section 7 compliance and requests for consultation from responsible entities should be regarded as official requests from a Federal action agency. Note that the memorandum directs FWS staff to provide HUD with a copy of the biological opinion if a jeopardy or adverse modification finding is made and to notify HUD if any problems arise during the consultation process.

Project Description

The proposed project is located in the City of Sacramento, California in the vicinity of North 12th Street and Richards Boulevard. Currently, the project area is comprised of urban development and vacant land.

The proposed project would develop a mixed-income, mixed-use community comprising 218 replacement public housing units, 268 new market-rate rental and Low-Income Housing Tax Credit (LIHTC) units, a realigned internal street network, green open space, and other community amenities on two noncontiguous but proximate properties totaling approximately 24.2 acres that currently include

300 Richards Blvd., 3rd Floor
Sacramento, CA 95811

Help Line: 916-264-5011
CityofSacramento.org/dsd

public housing and undeveloped land. The project would also include construction and operation of the proposed RT Dos Rios Light Rail Station on the existing RT Light Rail Blue Line on and adjacent to North 12th Street.

The enclosed Biological Assessment (BA) includes descriptions of the discretionary action to be considered and the specific area that may be affected.

Identification of Endangered Species

The enclosed BA analyzes the potential effects that the proposed project may have on the following federally listed threatened (T), endangered (E), and candidate species (C):

- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (T)
- California red-legged frog (*Rana draytonii*) (T)
- California tiger salamander (*Ambystoma californiense*), (T)
- Vernal pool fairy shrimp (*Branchinecta lynchi*) (T)
- Vernal pool tadpole shrimp (*Lepidurus packardii*), (E)
- Delta Smelt (*Hypomesus transpacificus*) (T)
- Steelhead (*Oncorhynchus (=salmo) mykiss*) (T)
- Giant garter snake (*Thamnophis gigas*) (T)

No critical habitat is present in the project area.

Though included in the USFWS list of special-status with potential to occur in the Action Area, the aquatic species are not expected to occur within the vicinity of the Action Area because suitable habitat is not present. Occurrence of valley elderberry longhorn beetle habitat is consistent with information collected during field surveys, and California Natural Diversity Database (CNDDDB) species occurrence records.

The enclosed BA includes listed species that may be affected by the proposed actions, the manner in which the proposed action may affect any listed species, an analysis of cumulative effects, and all other relevant available information. Conservation and performance measures to minimize potential impacts to listed species are also included.

The City, on behalf of HUD, has determined, based on the best scientific and commercial data available, that the proposed project: **may affect, but is not likely to adversely affect** valley elderberry longhorn beetle; and will have **no effect** on California red-legged frog, California tiger salamander, vernal pool fairy shrimp, vernal pool tadpole shrimp, Delta Smelt, Steelhead, or giant garter snake.

Conclusion

Based on the above analysis, RE believes that this activity may affect, but is not likely to adversely affect listed species or adversely modify designated critical habitat. Therefore, as an authorized representative of the RE administering the above-cited HUD program, I hereby request formal consultation on the potential effects of this activity on all federally listed threatened and endangered species and designated critical habitat as required under section 7(a)(2).

Your expedited assistance on this matter is very much appreciated. If you have questions about this request, please contact Dana Mahaffey, Associate Planner, City of Sacramento as soon as possible at 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, 916-808-2762, DMahaffey@cityofsacramento.org. Please contact Kathleen McNulty, Environmental Protection Specialist, Department of Housing and Urban Development, Region IX, One Sansome Street, Suite 1200, San Francisco, CA 94104, 415-489-6644, Kathleen.A.McNulty@hud.gov in the event that HUD's involvement is required.

Sincerely,



Dana Mahaffey
Associate Planner
City of Sacramento

Attachment(s)

1. Twin Rivers Transit-Oriented Development and Light Rail Station Project – Biological Assessment for Consultation with U.S. Fish and Wildlife Service
2. Memorandum regarding Endangered Species Act Consultation Compliance with “Responsible Entities” under U.S. Department of Housing and Urban Development’s Assumption Authority (24 CFR Part 58)

TWIN RIVERS TRANSIT-ORIENTED DEVELOPMENT AND LIGHT RAIL STATION PROJECT

Biological Assessment for Consultation with U.S. Fish and
Wildlife Service

Prepared for
City of Sacramento

September 2016



TWIN RIVERS TRANSIT-ORIENTED DEVELOPMENT AND LIGHT RAIL STATION PROJECT

Biological Assessment for Consultation with U.S. Fish and Wildlife Service

Prepared for
City of Sacramento

September 2016

On behalf of the U.S. Department of
Housing and Urban Development

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140202

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SECTION 1

Introduction

1.1 Introduction

The Proposed Action would develop a mixed-income, mixed-use community comprising 218 replacement housing units, 268 new market-rate rental and Low-income Housing Tax Credit units, a realigned internal street network, green open space, and other community amenities on two noncontiguous but proximate properties totaling approximately 24.2 acres that currently include public housing and undeveloped land. The Proposed Action would also include construction and operation of the proposed Sacramento Regional Transit (RT) Dos Rios Light Rail Station on North 12th Street of the existing RT Light Rail Blue Line. The Action Area includes the 24.2-acre properties and the Dos Rios Light Rail Station on North 12th Street.

Purpose of the Biological Assessment

The purpose of this biological assessment (BA) is to review the Proposed Action in sufficient detail to assess potential effects on Federally listed threatened or endangered species under the jurisdiction of U.S. Fish and Wildlife Service (USFWS). The BA is prepared in accordance with requirements set forth under Section 7 of the Federal Endangered Species Act (FESA) (16 U.S. Code [USC] 1536[c]). Under provisions of Section 7(a)(2) of FESA, a Federal agency that permits, licenses, funds, or otherwise authorizes activities must consult with USFWS, as appropriate, to ensure that its action will not jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The proposed Federal action by U.S. Department of Housing and Urban Development (HUD) is to fund the Proposed Project. In connection with this Federal action, HUD will initiate FESA Section 7 consultation with the USFWS.

The City of Sacramento assumes consultation responsibility pursuant to HUD's regulations implementing NEPA, codified by HUD at 24 CFR Part 58, which govern the environmental review procedures for HUD-sponsored activities. The regulatory requirements at 24 CFR 58.4 require units of local governments (responsible entities – "RE's") to assume the responsibility for environmental review, decision-making, and actions that would otherwise apply to HUD under the provisions of NEPA and other provisions of law that further the purposes of NEPA. This includes Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). For purposes of the Proposed Action, the City is the Responsible Entity, and therefore has assumed consultation responsibility.

1.2 Consultation to Date

A list of federal endangered and threatened species that have the potential to occur in the Action Area or may be affected by the Proposed Action was obtained from the Sacramento Fish and Wildlife Office website in 2016 (see **Appendix A**). This list identifies species that may occur within the boundary of the Action Area and/or may be affected by the Proposed Action.

1.3 Species Considered

A list of species Federally listed as threatened or endangered and candidate species present or with potential to occur in the Action Area was developed. Information was gathered from a records search of the USFWS sensitive species database (**Table 1**).

A number of Federally listed or candidate wildlife species are known to have occurred historically, in the Action Area. Most of the species inhabiting the region are not expected to occur in the Action Area because it lacks suitable habitat, it is outside the range of the species, or the species has been extirpated from the area. These species include multiple vernal pool invertebrates, California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), and giant garter snake (*Thamnophis gigas*). Listed fish species are not present because there is no suitable aquatic habitat present.

The results of this analysis indicated that one Federally listed species has the potential to occur in the Action Area and be affected by implementing the action: the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), which is Federally listed as threatened.

1.4 Critical Habitat

Critical habitat is defined in Section 3(5)A of the ESA as the specific portions of the geographic area occupied by the species in which physical or biological features essential to the conservation of the species are found and that may require special management considerations or protection. Specific areas outside of the geographic area occupied by the species may also be included in critical habitat designations upon a determination that such areas are essential for the conservation of the species. Critical habitat has been designated for valley elderberry longhorn beetle; however, the Action Area is not located within the designated area.

1.5 Report Organization

Section 2 (*Description of the Proposed Action*) provides a description of the Proposed Action components within the Action Area. Conservation measures are also presented in Section 2 to avoid, minimize, or otherwise reduce the effects to the Federally listed species. Section 3 (*Environmental Baseline*) describes the environmental baseline, including natural communities and habitat conditions present in the Action Area. Section 4 (*Species Accounts*) provides species accounts for all species addressed in the BA. Section 5 (*Effects of the Proposed Action*) describes the direct, indirect, and cumulative effects on species that may result from the Proposed Action. Section

6 (*Conclusions and Determination*) provides the ESA-based conclusion statements for the effects of Proposed Action on the Federally listed special-status species, and Section 7 (*References*) lists the references cited in this BA.

**TABLE 1.
SPECIES WITH POTENTIAL TO OCCUR IN THE ACTION AREA**

Common Name Scientific Name	Federal Status	Habitat Description/Blooming Period	Potential for Effect
Amphibians			
California red-legged frog (<i>Rana draytonii</i>)	T	Breeds in slow moving streams with deep pools, ponds, and marshes with emergent vegetation.	No effect. No suitable habitat within or within the vicinity of the Action Area.
California tiger salamander (<i>Ambystoma californiense</i>)	T	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Needs underground refuges and vernal pools or other seasonal water sources.	No effect. No suitable habitat within or within the vicinity of the Action Area.
Crustaceans			
Vernal Pool fairy shrimp (<i>Branchinecta lynchi</i>)	T	Life cycle restricted to vernal pools	No effect. No suitable habitat within or adjacent to the Action Area.
Vernal Pool tadpole shrimp (<i>Lepidurus packardii</i>)	E	Life cycle restricted to vernal pools	No effect. No suitable habitat within or adjacent to the Action Area.
Fishes			
Delta Smelt (<i>Hypomesus transpacificus</i>)	T	Found in the Sacramento-San Joaquin delta, Suisun Bay, Carquinez Straight, and San Pablo Bay	No effect. No suitable habitat within or adjacent to the Action Area.
Steelhead (<i>Oncorhynchus (=salmo) mykiss</i>)	T	Spawns in the Sacramento River and tributaries where gravelly substrate and suitable water conditions occur.	No effect. No suitable habitat within or adjacent to the Action Area.
Insects			
Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	T	Breeds and forages exclusively on blue elderberry (<i>Sambucus mexicana</i>) shrubs, below 3,000 feet in elevation.	May effect. Elderberry shrubs with stems measuring at least one inch in diameter occur within the development footprint in the Action Area.
Reptiles			
Giant garter snake (<i>Thamnophis gigas</i>)	T	Generally inhabits marshes, sloughs, ponds, slow-moving streams, ditches, and rice fields which have water from early spring through mid-fall, emergent vegetation (such as cattails and bulrushes), open areas for sunning, and high ground for hibernation and escape cover.	No effect. No suitable habitat within or adjacent to the Action Area.

NOTES:

Federal Status Codes:

- E = Listed as "endangered" under the federal Endangered Species Act
- T = Listed as "threatened" under the federal Endangered Species Act

SOURCE: USFWS, 2016

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SECTION 2

Description of the Proposed Action

2.1 Action Area

For the purposes of this BA, the “Action Area” refers to the area where direct and indirect effects would occur. The Action Area is located within the City of Sacramento in the central part of the Sacramento County, California **Figure 1**. The Action Area is located within the Sacramento East U.S. Geological Survey (USGS) 7.5-minute Topographic Quadrangle (USGS, 2015) (**Figure 2**). **Figure 3** shows an aerial image of the Action Area. The Action Area is comprised of two areas totaling approximately 24.2 acres that are separated from one another by North 12th Street. The larger westernmost area is approximately 21 acres in size. It is generally bound by Dos Rios Street to the west, Richards Boulevard to the northeast, Louise Street to the east, and North 12th Street to the south. The second and easternmost area is separated from the first by intervening parcels and North 12th Street and totals approximately 3.2 acres.

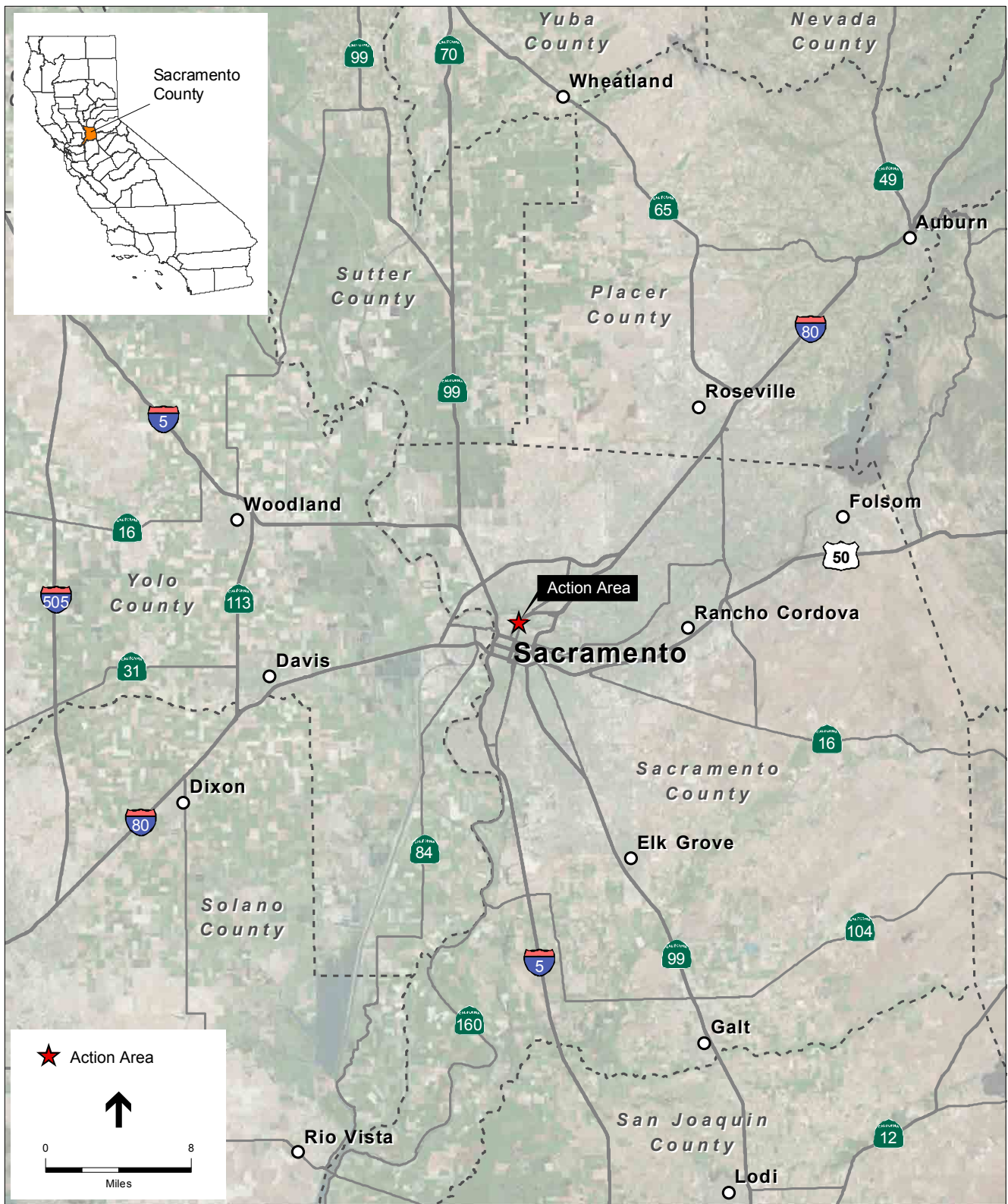
As described above, the Action Area is divided into two separate areas; the Twin Rivers Community Housing Complex area (21 acres), and vacant area located east of North 12th Street (3.2 acres). For purposes of this document, the two areas are collectively referred to as the Action Area. Individually, they are referred to as the “Twin Rivers Community Housing Complex” and the “Twin Rivers Community Housing Expansion Area.” Overall, the site is relatively flat and approximately 20 feet above mean sea level.

2.2 Proposed Project Elements

Proposed Action

The Proposed Action would develop a mixed-income, mixed-use community comprising 218 replacement housing units, 268 new market-rate rental and Low-income Housing Tax Credit units, a realigned internal street network, green open space, and other community amenities on two noncontiguous but adjacent properties totaling approximately 24.2 acres that currently include public housing and undeveloped land. The Proposed Action would also include construction and operation of the proposed Sacramento Regional Transit (RT) Dos Rios Light Rail Station on North 12th Street of the existing RT Light Rail Blue Line.

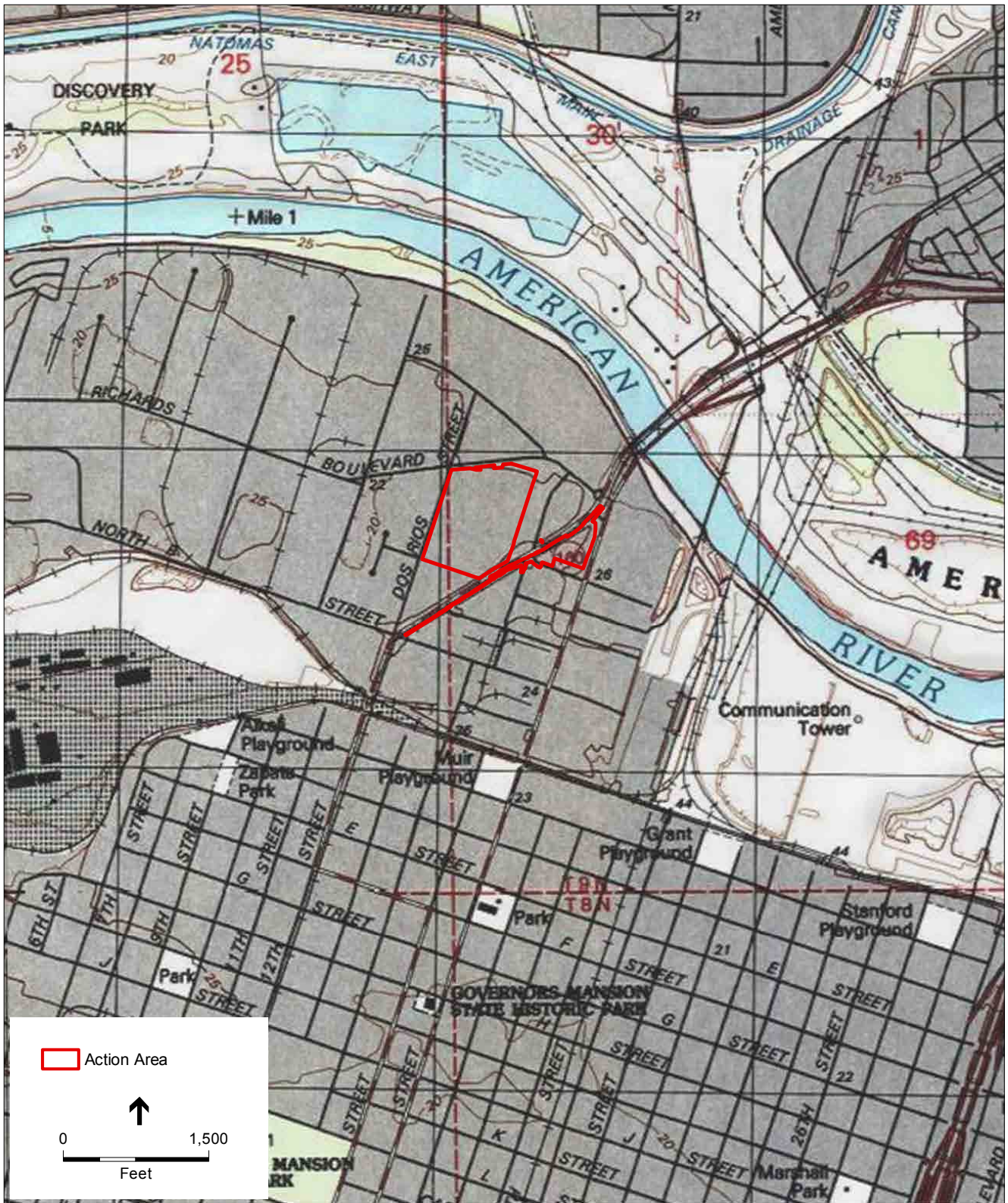
Several project elements are prominent: 1) the redeveloped Twin Rivers Community Housing Complex west of North 12th Street; 2) the Twin Rivers Community Housing Expansion Area east of North 12th Street in **Figure 4**; and 3) the new Dos Rios Light Rail Station on the eastern side of North 12th Street, adjacent to the expansion area.



SOURCE: i-cubed, 1999; ESRI, 2012; ESA, 2016

SHRA Twin Rivers . 140202

Figure 1
Regional Location



SOURCE: USGS 7.5' Topo Quad (Sacramento East, 1997); SHRA, 2015; ESA, 2016

SHRA Twin Rivers ..140202

Figure 2
Action Area



SOURCE: ESRI 2014; SHRA, 2015

SHRA Twin Rivers . 140202

Figure 3

Aerial Image of Action Area and Proposed Action Components



SOURCE: Torti Gallas and Partners • McCormack Baron Salazar, 2016

SHRA Twin Rivers . 140202

Figure 4
Conceptual Site Plan

Redevelopment and Expanded Twin Rivers Community Housing Complex

The Proposed Action would utilize both the 21-acre area that is currently occupied by the Twin Rivers Community Housing Complex and the currently vacant 3.2-acre area across North 12th Street to construct a range of residential units. The units would include multi-story townhouses, garden apartments, live/work units, and multi-family apartment buildings. In all, the Proposed Action would develop approximately 486 new residential units, replacing the existing 218 units within the Twin Rivers Complex, for a net increase of 268 new units.

Of these 486 units, approximately 376 of the units would be located in the existing Twin Rivers Community Housing Complex, fully replacing the existing 218 units and adding 158 units in that area. An additional 110 units would be located in the expansion area east of North 12th Street in a multi-family apartment building containing one-bedroom and two-bedroom units. The total unit count in both areas combined would thus be 486. Figure 4 shows the redeveloped and expanded Twin Rivers Community Housing Complex housing locations.

Street Alignments

Within the existing Twin Rivers Complex area, the Proposed Action would realign existing streets to facilitate mobility, accessibility, access, development, and continuity with the projected buildout of the River District Specific Plan. The altered street alignment within the project would complement the planned partial realignment of North 12th Street. The Proposed Action would eliminate neighborhood feeder streets within the existing Twin Rivers complex to make way for new street alignments and the altered shape of residential blocks.

Figure 4 shows the proposed street layout. “Street W” on the site plan would serve as the main roadway within the complex, and would contain a landscaped median, one traffic lane in each direction, one bicycle lane in each direction, and parking lanes and sidewalks along both sides of the roadway, for a total right-of-way (ROW) of 81 feet. Local streets within the project site would contain a travel lane in each direction, a single parking lane, and sidewalks and landscaped parkways along both sides of the roadway, for a total ROW of 53 feet.

Approximately 522 parking spaces would be included as part of the project within the existing Twin Rivers complex area. These would be provided through a combination of dedicated parking stalls and on-street parking.

Landscaping and Open Space/Recreation Areas

The Proposed Action would construct several open space and recreation areas on the site, including a 0.91-acre park area in the center of the main housing complex, as well as a pool and amenity space in the northern portion of the complex. All roadways within the site would be lined with trees and supplemented by shrubs and other vegetation to provide a complete landscaped effect. Parking areas would also be interspersed with trees.

Exterior lighting on the site would consist of street lighting as well as security and building lighting at appropriate locations. All lighting would comply with City of Sacramento exterior lighting standards.

Utilities

Domestic and Irrigation Water Supply

Water supply for the project site would be provided by existing water supply infrastructure. The City currently has three water transmission mains (pipes larger than 12 inches) that serve the RDSP area. The project site is anticipated to access water supply from ancillary water mains that draw water from a 36-inch main in North B Street and 42-inch main in 18th Street. Proposed domestic water and irrigation water services would be metered services protected with City-approved backflow devices in accordance with City of Sacramento cross control policies. Fire water services would also be protected with approved backflow devices, but would not be metered in accordance with City of Sacramento cross control policies. The fire water system would be a looped system, with multiple points of connection to the City's public water main system to increase on-site fire supply and pressure.

Stormwater and Sewer Systems

The existing Twin Rivers Community Housing Complex is currently served by a separated storm and sewer system. The Sacramento Regional County Sanitation District (SRCSD) provides wastewater collection and treatment for the project site. Wastewater is conveyed to the Sacramento Regional Wastewater Treatment Plant (SRWTP). There are existing public sanitary sewer main lines ranging in size from 6-inch to 12-inch diameter adjacent the project site. The proposed site improvements would attempt to utilize existing sanitary sewer services where feasible, and abandon all existing sanitary sewer services that are determined to be inadequate for the Proposed Action's needs. New sanitary sewer services would be provided in accordance with the City of Sacramento standards, and served by the aforementioned existing public sanitary sewer mainlines adjacent the project site.

The proposed Twin Rivers Community Housing Expansion Area east of North 12th Street is located within the City Combined Storm-Sewer System (CSS). The CSS is an underground pipe network system that conveys both storm drain flows and sanitary sewer flows through a single pipe. Existing CSS mainlines are located within Sproule Avenue and North 16th Street, ranging in size from 8-inch to 12-inch diameter pipes. Within the CSS, the City standards require on-site sanitary sewer and on-site storm drain systems to be separated, with separate service connections to the City CSS mainlines. Although exact service locations of the proposed storm and sewer services have not been determined, it is assumed the Proposed Action storm drain and sanitary sewer services would be provided from the existing CSS mainlines located within Sproule Avenue and North 16th Street.

The City requires all infill developments comply with the City's "Do No Harm" policy. In order to comply with this standard, underground storage facilities through the use of oversized pipes, storm vaults, or similar methods, would be incorporated into the project design. A storm drain

study would be submitted to the City Department of Utilities demonstrating compliance with the City's "Do No Harm" at time of improvement plan review. Because all flows within the CSS are diverted to the County sewer treatment facilities, the portion of the site located within the CSS system would not be required to provide post-construction stormwater quality treatment. However, the portion of the project site located outside of the CSS would provide post construction stormwater quality treatment in accordance with current City requirements. Post construction treatment methods may include stormwater planters, vegetated swales, subsurface infiltration methods, and possibly underground mechanical systems.

Dos Rios Light Rail Station

The proposed Dos Rios Light Rail Station would add a stop on RT's Blue Line, which runs from Watt Avenue and I-80 in North Sacramento to its southerly terminus at Cosumnes River College located on the southern edge of Sacramento. The Dos Rios Light Rail Station would be located on the east site of North 12th Street, north of Sproule Avenue, adjacent to the Twin Rivers Community Housing Expansion Area.

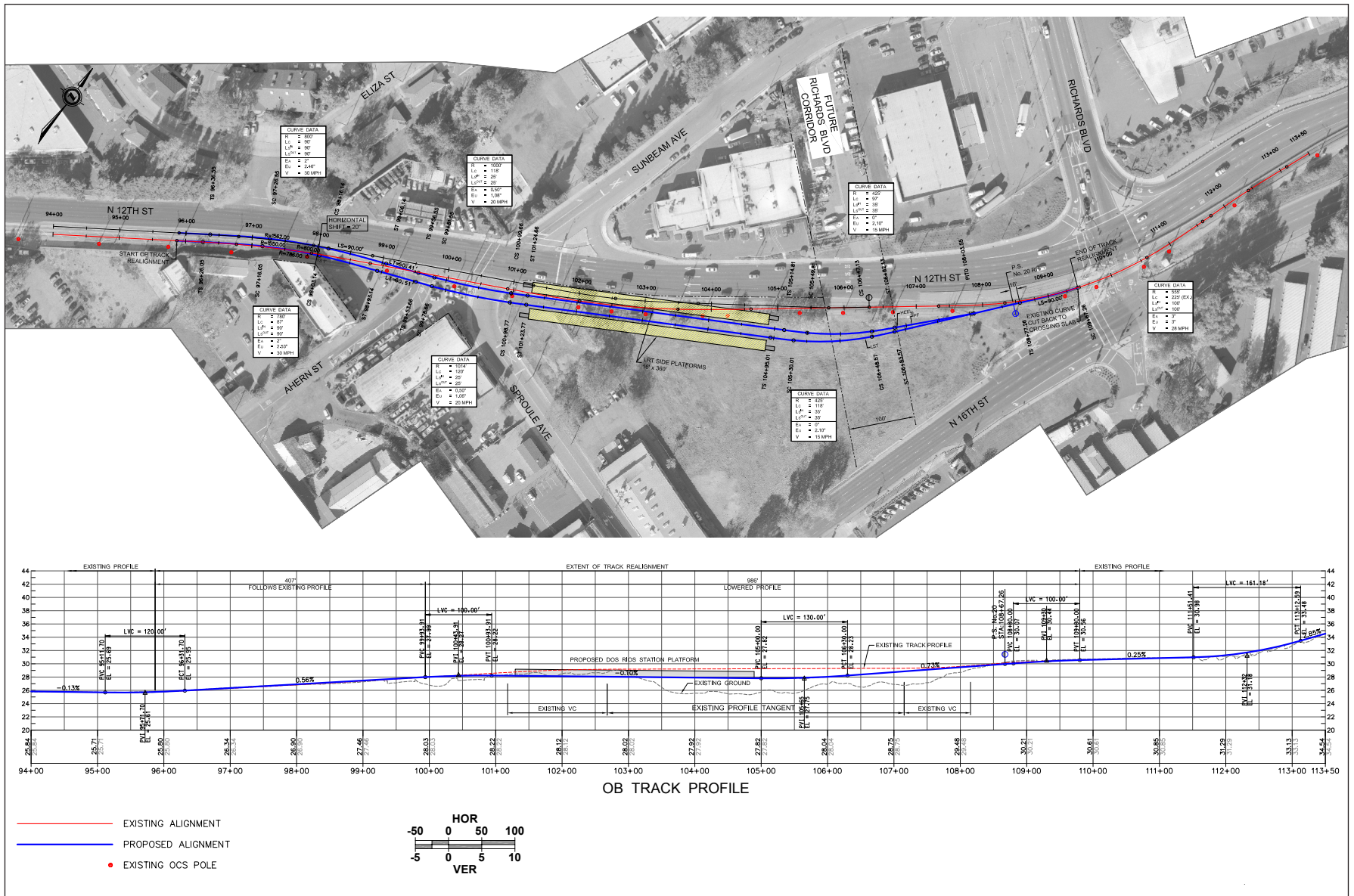
Station and Tracks

Figure 5 shows the proposed layout of the light rail; station and associated trackwork. The addition of the station would require realignment of the existing light rail tracks along North 12th Street and site preparation to include demolition, grading, filling and compacting of the station site. The station would consist of raised platforms that allow for safe entry and exit to and from light rail cars, for both north and southbound rail lines. The existing track configuration would be shifted southeast, to create space for the platform between the tracks and North 12th Street. Space between the north and southbound tracks would be widened on the approaches to the station to accommodate Overhead Catenary System (OCS) poles that support the overhead electrical conductors.

Off-Site Switch Replacement and Signals

South of the project site, two rail switches are located at both ends of the existing rail turnout that connects the western (inbound, or southbound) and eastern (outbound, or northbound) tracks on North 12th Street, between C and D Streets. The turnout allows trains to use the eastern track for travel in both directions between Richards Boulevard and the Alkali Flat Station (located on 12th Street, between D and E Streets), but currently requires light rail personnel to manually operate the switch. The Proposed Action would add a powered switch machine, which would be required since the proposed track realignment construction phasing would require trains to operate on a single track through the Dos Rios Station area during portions of the construction. Addition of a powered switch machine would minimize the operating cost of diverting trains to the opposite track.

The turnouts would be controlled from computerized loops and not from a central location. A new signal case would be required to house control equipment and interfaces. Railway approach circuits would be added for normal direction of rail traffic. New train signals would be added at appropriate locations.



SOURCE: Parsons, 2015

SHRA Twin Rivers . 140202
Figure 5
 Dos Rios LRT Station Plan

Where signalized roadway intersections exist in close proximity to a railroad crossing, the railroad signal control equipment and the traffic signal control equipment should be interconnected. The normal operation of the traffic signals controlling the intersection should be preempted to operate in a special control mode when trains are approaching, to provide for safe vehicular and pedestrian movements (Institute of Transportation Engineers, 2006). Existing signal blocks to the north and south of the proposed station would require modifications to their timing and logic functions to accommodate the new station. These blocks are controlled by an existing relay case, located to the north of the American River Bridge and another, located at the northeast corner of 12th Street and D Street. The project would also modify traffic signal interfaces (pre-emption) between the American River and 12th and E Streets to accommodate dwell time for the new station.

Transfer Power Substation

Traction power substations (TPSS) are spaced at calculated distances along electrified light rail trackways to allow for power redundancy. Existing TPSS facilities are located to the south and north of the proposed station site, but are not optimally situated to provide the required power distribution needed to operate the line following the addition of the new Dos Rios station. As such, a new TPSS would be required in the vicinity of the new station.

TPSS facilities must be located no more than 400 feet from the tracks and the associated OCS poles. Three options are under consideration for placement of the new TPSS:

- Option 1, on City-owned land in the triangular-shaped parcel at the intersection of North 12th Street, North 16th Street, and Richards Boulevard, immediately north of the Twin Rivers Community Housing Expansion Area. This option would require acquisition of the site from the City.
- Option 2, in the Twin Rivers Community Housing Expansion Area in the area shown as Block “K” in Figure 4. This parcel is currently privately-held, but would be acquired as part of the development of the housing expansion area.
- Option 3, on the existing Twin Rivers Community Housing Complex, adjacent to North 12th Street near the existing entrance to the housing complex.

Regardless of location, the new TPSS would consist of a prefabricated building measuring 14-feet in width, 44-feet in length, and 12-feet in height located within a fenced area approximately 40-feet by 60-feet in size. Maintenance vehicle access would be provided by a 12-foot-wide vehicle gate and a 3-foot-wide personnel gate. Besides the prefabricated building, the fenced area would also include a 12-foot by 25-foot paved vehicle apron between the adjacent public roadway and the gate. Landscaped screening would be provided around the facility.

Construction Timing

Redeveloped and Expanded Twin Rivers Community Housing Complex

The redevelopment of the existing housing complex and construction of the expansion area housing east of North 12th Street would take approximately seven years, beginning in 2017 with anticipated project completion in 2023. Acquisition, infrastructure availability, market conditions, demolition, and the timing of the new Dos Rios light rail station construction would have an impact on the phasing of physical development of the housing facilities. On the Twin Rivers Community Housing Expansion Area parcels, it is likely that the new light rail station would be constructed prior to the construction of the adjacent housing. This would be done to avoid nighttime noise and other construction-related impacts to residents that could arise if housing were to be constructed and occupied prior to the station's construction. Construction within the existing Twin Rivers Community Housing Complex would not be subject to these constraints, and could be constructed at any time.

The project would be separated into phases to meet market conditions and also to potentially facilitate efficient relocation of residents from existing units into new replacement housing as the existing units are demolished. The phasing would involve a timing interplay as new housing is constructed, residents are moved into the new units, and the older units they have just been vacated are demolished, with the process repeating itself until the project is complete. Some residents would probably need to be moved to off-site housing during certain phases of construction.

A detailed Relocation Plan would be developed to maximize the options available to residents. These options could include temporary and permanent relocation with housing choice vouchers, relocation to other public housing units, and/or the phased demolition and development described previously that would allow residents to move from their current unit to a new unit. All relocations would be required to occur in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and Amendments (Public Law 91-646) and the California Relocation Act (California Government Code, Section 16, Section 7260 *et. seq.*) and related laws and regulations.

Physical construction of the housing facilities would occur in typical fashion, with demolition occurring first, followed by site preparation and grading, construction of roadways and utility improvements, and then construction of the housing units. Construction of the housing units would begin with the pouring of foundations, followed by framing and installation of rough electrical, plumbing, and heating, ventilation, and cooling (HVAC) components. Interior and exterior walls would be finished, followed by final fitting out of interior components and exterior landscaping.

Dos Rios Light Rail Station

Construction of the station and associated light rail modifications would take approximately 18 months. Some night work would likely be required to avoid disruption to existing light rail service and also to avoid traffic conflicts along North 12th Street. It is likely that the new light rail

station would be constructed prior to the construction of the adjacent housing in the expansion area. This would be done to avoid nighttime noise and other construction-related impacts to residents that could arise if housing were to be constructed and occupied prior to the station's construction.

Construction of the station would require the temporary closure of Sproule Avenue and Ahern Street at North 12th Street to accommodate construction of the widened track alignment. Construction would generally occur in four phases: 1) utility relocation and streetwork; 2) track realignment and signal modifications; 3) station construction; and 4) TPSS placement.

Conservation Measures

In order to avoid and minimize effects of the Proposed Action and to provide compensation for those impacts that would occur; a number of avoidance and minimization, and conservation measures are being included into the Proposed Action. All of the conservation measures are incorporated by the applicant as part of the description of the Proposed Action, meaning they are proposed as elements of the Proposed Action and are to be considered in conducting the environmental analysis and determining effects and findings.

Avoidance and Minimization Measures

The purpose of avoidance and minimization measures is to incorporate design refinements and reflect and incorporate best practices into the Proposed Action that avoid and/or minimize potential effects. These best practices tend to be relatively standardized and compulsory; they represent sound and proven methods to reduce the potential effects of an action. The rationale behind including environmental commitments is that the project applicant commits to undertake and implement these measures as part of the Project in advance of impact findings and determinations in good faith to improve the quality and integrity of the Project, streamline the environmental analysis, and demonstrate responsiveness and sensitivity to environmental quality. Residual impacts remaining after implementation of avoidance and minimization measures are addressed through compensatory conservation measures. Avoidance and minimization measures are described below.

Valley Elderberry Longhorn Beetle Protection

Projects affecting valley elderberry longhorn beetle habitat (i.e., elderberry shrubs) are required to mitigate impacts based on the number of stems 1.0 inch or greater in diameter at ground level that would be affected by project activities, the presence or absence of valley elderberry longhorn beetle exit holes in affected stems, and the type of supporting habitat (riparian or nonriparian) (USFWS 1999). All elderberry shrubs with one or more stems greater than 1 inch in diameter at ground level that may be affected would be replaced according to the USFWS Conservation Guidelines for the Valley Elderberry Beetle (1999) (USFWS guidelines) as stated below, or through the purchase of mitigation credits at a USFWS-approved mitigation bank.

- If elderberry shrubs are transplanted to an offsite mitigation location or conservation bank, relocation will be during the dormant season (November through the first 2 weeks in

February), unless a plant is exempted by a qualified biologist because of poor access or condition.

- Elderberry shrubs with stems measuring 1.0 inch or greater in diameter at ground level that may be adversely affected (i.e., transplanted or destroyed) will be replaced with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 8:1 (new plantings to affected stems).
- A mix of native plants will be planted at ratios ranging from 1:1 to 2:1 (native tree/plant species to each elderberry seedling or cutting).
- The conservation area will be protected in perpetuity as habitat for the valley elderberry longhorn beetle through the use of weed control, pesticide buffers, endowments, litter control, fencing, and signage.
- At least 1,800 square feet will be provided for each transplanted elderberry shrub. As many as 10 conservation plantings (i.e., elderberry cuttings or seedlings and/or associated native plants) may be planted within the 1,800-square-foot area with each transplanted elderberry, and an additional 1,800 square feet will be provided for every additional 10 conservation plants.
- The conservation area will be monitored for a period of either 10 consecutive years or for 7 years over a 15-year period. The applicant may elect either 10 years of monitoring, with surveys and reports every year, or 15 years of monitoring, with surveys and reports on years 1, 2, 3, 5, 7, 10, and 15.

At the time of the release of this BA it has not been determined if the City would plant and monitor valley elderberry longhorn beetle habitat, or purchase credits at a mitigation bank to compensate for elderberry shrub loss. In accordance with the guidelines, each credit occupies 1,800 square feet (0.041 acre) of planting space, therefore if four elderberry shrubs are removed from the Action Area, USFWS would require the City to secure up to 2.8 credits at a conservation bank or to plant 1.148 acres of valley elderberry longhorn beetle habitat at an offsite location, in accordance with USFWS guidelines.

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SECTION 3

Environmental Baseline

3.1 Methods

The information contained in this section is based upon field reconnaissance, literature searches, and database queries. The following sources were reviewed prior to field reconnaissance visits:

- Color aerial photographs;
- California Natural Diversity Database (CNDDDB) list of special-status species occurrences within the Sacramento East and eight surrounding USGS 7.5-minute topographic quadrangles (Carmichael, Citrus Heights, Clarksburg, Elk Grove, Florin, Rio Linda, Sacramento West, and Taylor Monument) (CDFW, 2016);
- List of Federal Endangered and Threatened Species that may occur in the proposed project location, and/or may be affected by the proposed project (USFWS, 2016); and
- California Native Plant Society (CNPS) list of rare and endangered plants known to occur within the Sacramento East and eight surrounding USGS 7.5-minute topographic quadrangles (CNPS, 2016).

In addition to these references, ESA biologists reviewed species literature. All of the above references were used to determine the potential for species listed in Table 1 above.

Field surveys included recording existing biological resources in and round the Action Area, assessing the Action Area for suitability to support federally listed and candidate species. Surveys were conducted by ESA biologists in December, 2015 and July 2016. Habitats were mapped and field notes were recorded.

3.2 Regional Setting

The Action Area is located in the southern Sacramento Valley. The Sacramento Valley consists largely of floodplains, alluvial fans, and fan terraces, formed from alluvial material washed down from the Sierra Nevada and the Northern Coastal Range. The Mediterranean-type climate is hot and dry during the summer and cool and wet during winter. Average annual precipitation in the region is 18 inches. The mean maximum temperature is 73 degrees Fahrenheit (°F) and the mean minimum temperature is approximately 49 °F (Western Regional Climate Center, 2016).

3.3 Action Area Setting

The Action Area is located within the City of Sacramento in the vicinity of the intersection of North 12th Street and Richards Boulevard. Currently, the Action Area is comprised of urban development and vacant land.

3.4 Description of Habitats

Vegetation communities and habitat types onsite include annual grassland and developed areas. The location of different habitats within the Action Area is shown in **Figure 6**.

Annual Grassland

Annual grassland habitat includes upland vegetation communities dominated by introduced and native annual and perennial grasses and forbs. Species present within the Action Area include wild oat (*Avena fatua*), hare barley (*Hordeum murinum* var. *leporinum*), yellow star thistle (*Centaurea solstitialis*), and field mustard (*Brassica rapa*). This habitat includes volunteer tree-of-heaven (*Ailanthus altissima*) and elderberry shrubs (*Sambucus nigra* subsp. *caerulea*).

Urban/Disturbed

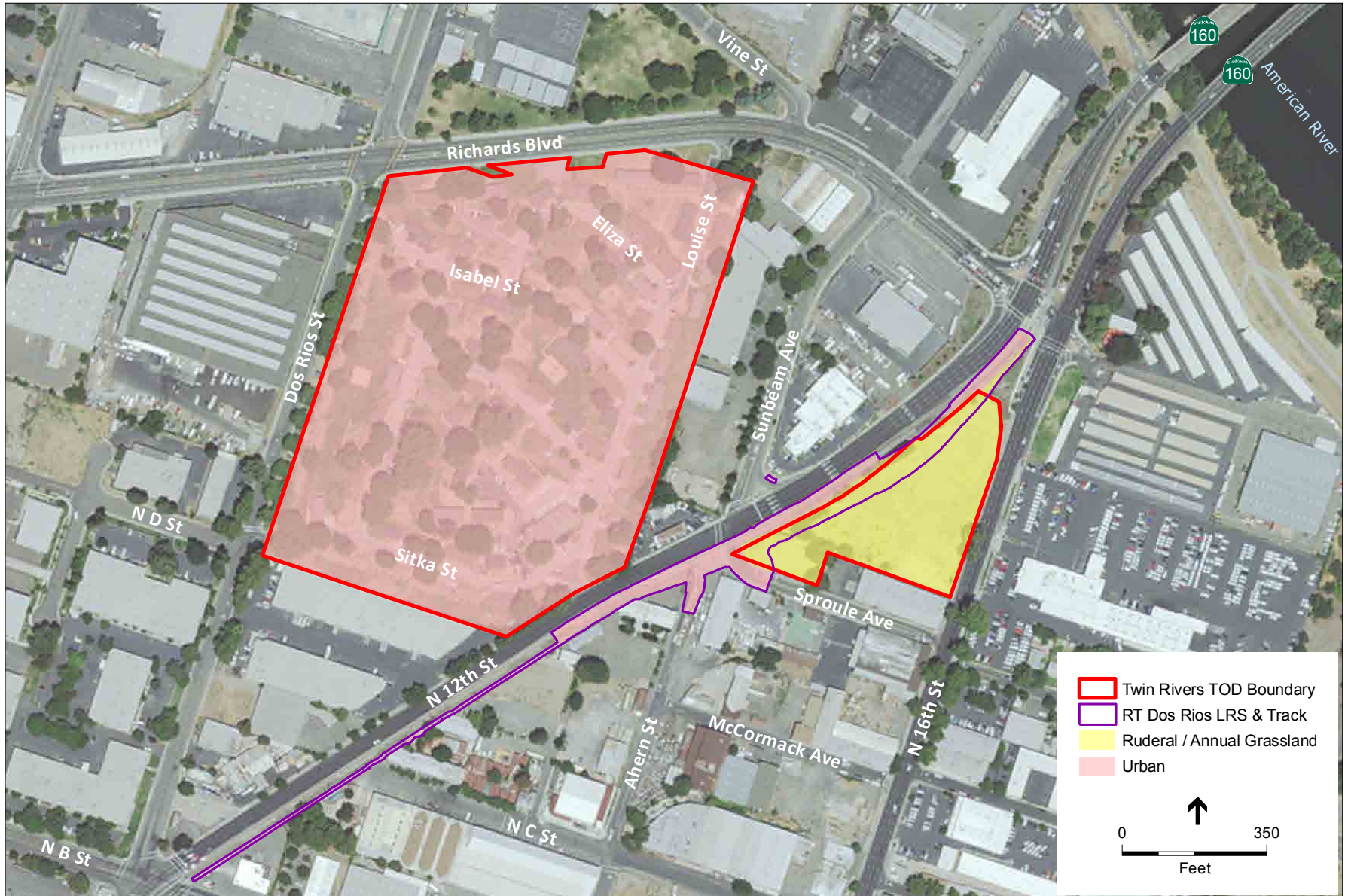
Urban/Disturbed habitat includes all areas that have been developed, including areas where leveling, paving, and landscaping has occurred. Vegetation in Urban/Disturbed areas includes ornamental vegetation and weed species.

3.5 Valley Elderberry Longhorn Beetle

An elderberry shrub survey conducted within the Action Area identified 11 shrubs with stems greater than 1 inch in diameter along the western side of the Twin Rivers Community Housing Expansion Area. The locations of each of the shrubs were recorded using a GPS and also recorded on aerial photographs. The size class of the stems and whether or not exit holes were present were recorded. None of the shrubs are located in riparian habitat. Three shrubs (ID-1, ID-3, ID-5) had one or more stems with a diameter between 1 and 3 inches, one shrub (ID-4) had two stems with a diameter between 3 and 5 inches, and seven shrubs only had stems smaller than 1 inch diameter (**Table 2** and **Figure 7**). No exit holes were found in any of the stems greater than 1 inch diameter.

Based on examination, it is apparent that many of the elderberry shrubs onsite have been cut back multiple times. Some of the shrubs, specifically ID-1, ID-9, and ID-10, have large stumps with smaller stems shooting out of the stump. It appears that landowners have routinely cut all vegetation on their properties, including elderberry shrubs, to increase visibility in the area due to safety concerns, primarily from homeless individuals camping and loitering in the area.

Information pertaining to valley elderberry longhorn beetle biology and distribution outside of the Action Area is provided in Section 4, “*Species Account*.”



SOURCE: ESRI 2014; SHRA, 2015

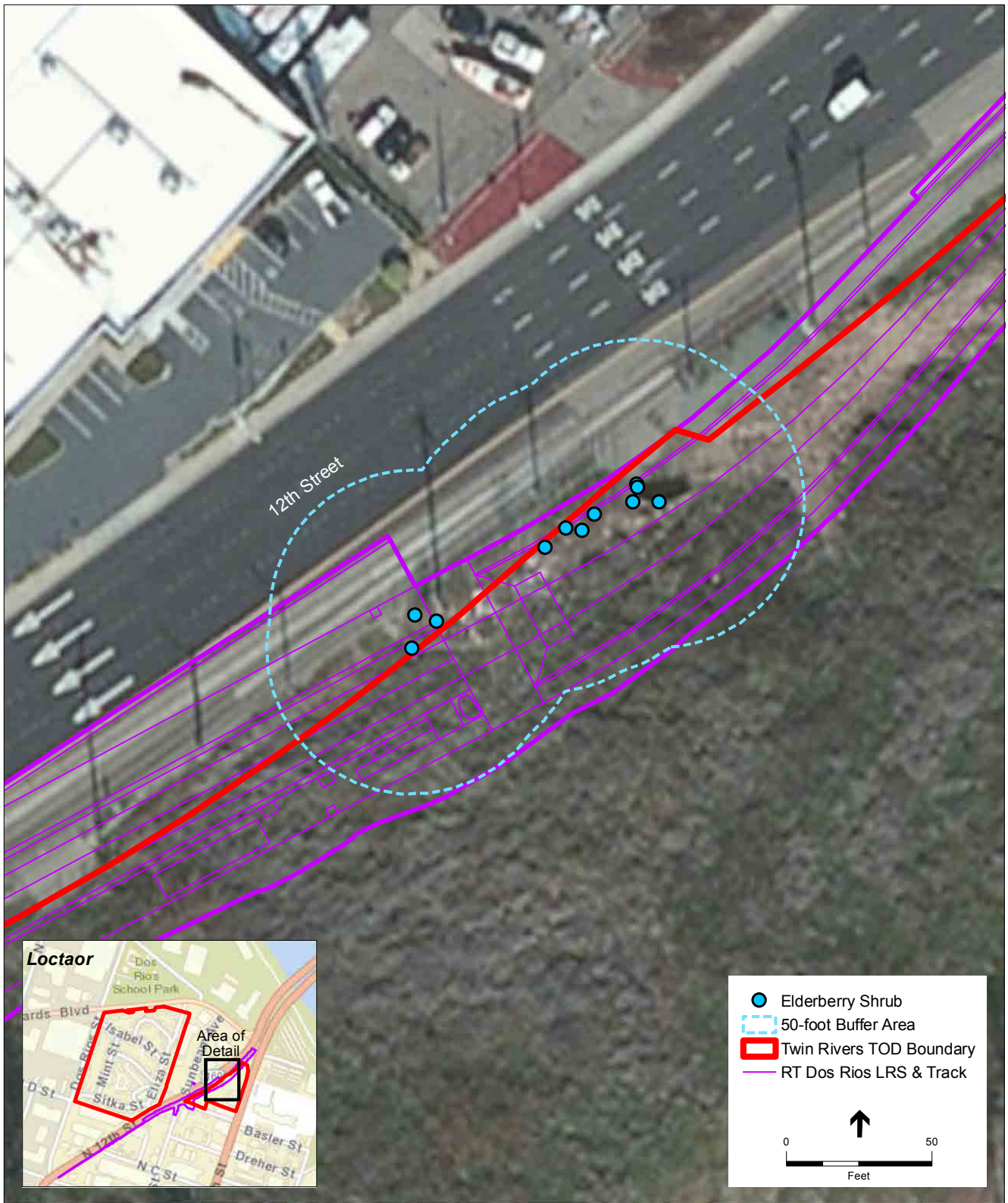
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Figure 6
Habitats

**TABLE 2.
ELDERBERRY SHRUBS WITHIN THE ACTION AREA**

ID #	Stems ≥1" and ≤3"	Stems >3" and <5"	Stems ≥5"	Exit Holes (Y/N)	Affected by the Proposed Action
1	1	-	-	N	Y
2	-	-	-	N/A	Y
3	2	-	-	N	Y
4	-	2	-	N	Y
5	1	-	-	N	Y
6	-	-	-	N/A	Y
7	-	-	-	N/A	Y
8	-	-	-	N/A	Y
9	-	-	-	N/A	Y
10	-	-	-	N/A	Y
11	-	-	-	N/A	Y

SOURCE: ESA, 2016



SOURCE: Microsoft, 2011; ESRI, 2012; ESA, 2016

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Figure 7
Elderberry Shrub Locations

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SECTION 4

Species Account

4.1 Valley Elderberry Longhorn Beetle

Legal Status

The valley elderberry longhorn beetle was listed as threatened on August 8, 1980 (45 FR 52803). Critical habitat also was designated at that time. The closest critical habitat for the species is located along the American River, approximately 0.5 miles northeast of the Action Area (45 FR 52803, August 8, 1980) along the north side of the American River floodplain. The USFWS released the *Valley Elderberry Longhorn Beetle Recovery Plan* in 1984 (USFWS, 1984), and conservation guidelines were issued by USFWS in 1999. On August 19, 2011, USFWS announced a 90-day finding on a petition to delist the species (76 FR 51929). Subsequently on September 19, 2014, USFWS withdrew the proposed rule to delist valley elderberry longhorn beetle concluding that threats to the species and its habitat have not been reduced to the point where the species no longer meets the definition of threatened under FESA (79 FR 55879).

Historical and Current Status and Distribution

Valley elderberry longhorn beetle is endemic to the Central Valley of California and adjacent Sierra Nevada foothill regions, up to approximately 2,000–3,000 feet in elevation (Barr 1991). The species inhabits riparian and upland habitats, where its host plant, the elderberry, grows.

At the time of listing in 1980, the valley elderberry longhorn beetle was known to occupy fewer than 10 locations. These locations included sites along the American River and Putah Creek and along the Merced River. Currently, valley elderberry longhorn beetle is known at 36 locations distributed between Tehama County in the northern Sacramento Valley, and Merced County in the San Joaquin Valley (79 FR 55874, September 17, 2014). Population information collected in 2014 found the valley elderberry beetle to be uncommon to rare, with patchy distribution within the presumed historical range. The species was found in 36 geographical regions, including areas along the American, Bear, Sacramento, Feather, Cosumnes, Mokelumne, Calaveras, Merced and Tuolumne Rivers and their tributaries, and Thomes, Cache, and Putah Creeks. The species is found in locally clustered areas along the aforementioned waterways. Population survey data are based on known occurrences of exit holes and adult beetle observations (79 FR 55874, September 17, 2014).

The 36 known locations are considered to be discrete from one another based on the presumed maximum dispersal distance of approximately one mile. Although the beetles can be locally

common, they typically occur at very low densities (Collinge et al. 2001). The species is not evenly distributed across its known range, and beetles are often found in population clusters (Barr 1991; Collinge et al. 2001). Frequently, only particular clumps of shrubs in an area harbor valley elderberry longhorn beetle, and other, similar clumps of shrubs do not. The presence of unoccupied elderberry shrubs does not necessarily indicate that a particular cluster of shrubs constitutes poor-quality habitat or is otherwise uninhabitable (Talley et al. 2007). Local aggregations of valley elderberry longhorn beetle are influenced by habitat patch characteristics, such as the size of the patch, presence of large shrubs and diversity of stem sizes, and habitat connectivity (Talley 2007; Talley et al. 2007). River systems without valley elderberry longhorn beetle are unlikely to be colonized by valley elderberry longhorn beetle even if suitable habitat is present (Collinge et al. 2001). Conversely, river systems where valley elderberry longhorn beetle is present can experience localized extinctions in areas that formerly supported the species, and formerly unoccupied elderberry shrubs can be colonized by beetles from proximate populations (Collinge et al. 2001).

Valley elderberry longhorn beetle is a habitat specialist with limited dispersal ability and a short adult life span, and it possesses rarity traits such as low local numbers within a population structure that has become fragmented within its historical range, and continues to be fragmented further by ongoing impacts to its habitat. As such, the USFWS considers valley elderberry longhorn beetle to likely become an endangered species in the foreseeable future (79 FR 55874, September 17, 2014).

Life History

The entire valley elderberry longhorn beetle life cycle depends on the beetle's host plant, the elderberry shrub. After mating, the female lays her eggs in the crevices of the elderberry bark. Upon hatching (after approximately 10 days), the larvae bore into the pith of the shrub and feed inside the stems. An assortment of elderberry branch sizes are used for larval development and pupation (0.5 to 7.8 inches in diameter) (Lang et al. 1989; Barr 1991; Collinge et al. 2001); however, exit holes are most frequently found in stems approximately 2–4 inches in diameter (Barr 1991; Collinge et al. 2001). Larvae remain in the elderberry stems for 1–2 years, until they mature.

Adult beetles emerge during spring through the holes they created as larvae. They are active from March through June (USFWS 1984; Barr 1991). They are herbivores, feeding on elderberry foliage, flowers, and nectar until they mate and complete their life cycle.

Elderberry is a common component of riparian forest and riparian scrub habitats in the Central Valley. Unlike many other riparian species, elderberry is not flood tolerant and is more commonly found in areas that do not experience regular floodplain inundation (Fremier and Talley 2009; Vaghti et al. 2009). Elderberry prefers moist, well-drained soils in sunny sites, usually in early successional plant communities; however, it frequently persists in openings in mature riparian woodlands and as an understory species in riparian woodlands (Stevens and Nesom 2006). Elderberry shrubs frequently are observed in association with diverse riparian species, with community species composition varying with locality. Commonly associated plants

include Fremont cottonwood, western sycamore, black walnut, arroyo willow (*Salix lasiolepis*), Goodding's willow, sandbar willow, valley oak, boxelder, Oregon ash (*Fraxinus latifolia*), wild grape, and poison oak (*Toxicodendron diversilobum*) (USFWS 1984; Vaghti et al. 2009). However, elderberry is not restricted to riparian areas, and it is the characteristic species of elderberry savannas, where it may occur with various species of oaks (e.g., valley oak, interior live oak [*Q. wislizenii*] or blue oak), poison oak, and other upland shrubs of the Sierra Nevada foothills (Holland 1986).

Threats and Reasons for Decline of Valley Elderberry Longhorn Beetle

The loss of habitat has been, and continues to be significant impact to valley elderberry longhorn beetle. Agriculture conversion, levee construction, stream channelization, and road construction, and urban development within its historical range contribute to the destruction, fragmentation, and modification of the species habitat. Other threats include human use, including pruning of elderberry shrubs, to contribute to habitat destruction. Road and trail use and their maintenance and the effects of dust related to these activities are threats to quality of available habitat (79 FR 55874, September 17, 2014).

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SECTION 5

Effects of the Action

This chapter describes the potential direct, indirect, interrelated, interdependent, and cumulative effects that the Proposed Action may have to those species identified in Section 1. The following discussion of potential Project effects on proposed activities within the Action

5.1 Direct and Indirect Effects

Direct effects are those effects generated directly from the Proposed Action. Examples of direct effects to listed species include incidental take during construction, elimination of suitable habitat due to project construction, and degradation of habitats due to construction-related activities (50 CFR 402.02). Indirect effects are those effects that are caused by the Proposed Action and are later in time. Examples of these types of effects to biological resources include the discharge of effluent or other material that adversely affect water quality downstream of the project site, an increase in human activity during project operations, and potential growth-inducement effects (50 CFR 402.02).

Construction-related Effects

Potential direct effects on valley elderberry longhorn beetle may occur upon implementation of the Proposed Action. These direct effects may result from removing and transplanting four elderberry shrubs containing stems greater than one-inch in diameter. All shrubs onsite would be removed during construction. As such, there would be no indirect effects to valley elderberry longhorn beetle. **Table 3** summarizes potential effects to the five shrubs with stems measuring greater than one-inch in diameter that are within the Action Area.

**TABLE 3.
ELDERBERRY SHRUB EFFECTS**

ID #	Stems ≥1" and ≤3"	Stems >3" and <5"	Stems ≥5"	Exit Holes (Y/N)	Riparian Habitat (Y/N)
1	1	-	-	N	N
3	2	-	-	N	N
4	-	2	-	N	N
5	1	-	-	N	N

SOURCE: ESA, 2016

Potential project effects to these shrubs would be compensated for through the implementation of the conservation measures described in Section 2. The City would be required to mitigate for these effects in accordance with USFWS guidelines (1999). A summary of potential valley elderberry longhorn beetle mitigation requirements is provided in **Table 4**. Implementing compensatory conservation measures for valley elderberry longhorn beetle would fully compensate for the effects on this species from implementing the Proposed Action.

TABLE 4.
VALLEY ELDERBERRY LONGHORN BEETLE MITIGATION REQUIREMENTS

Stem Size (inches)	Number of Affected Stems	Required Ratio of Elderberry Seedlings ¹	Required Ratio of Native Plants ²	Required Number of Elderberry Seedlings	Required Number of Associated Native Plants
VELB Exit Holes Absent					
1-3	4	4:1	2:1	16	8
3-5	2	6:1	2:1	12	4
>5	0	8:1	2:1	0	0
VELB Exit Holes Present					
None					
Totals				28	12
Estimated total number of VELB credits required³				2.8	

NOTES: VELB=valley elderberry longhorn beetle

¹ Ratios correspond to the number of elderberry seedlings to be planted per elderberry stem affected.

² Ratios correspond to the number of native plantings required per elderberry seedling planted.

³ VELB credits assume ten plantings per habitat unit.

SOURCE: USFWS, 1999

Long-term Effects

Implementing the Proposed Action would have long-term effects on valley elderberry longhorn beetle. Because all elderberry shrubs in the Action Area would be removed, there would be no remaining habitat available for valley elderberry longhorn beetle at this location. However, transplanting elderberry shrubs and securing mitigation credits or establishing suitable valley elderberry longhorn beetle habitat at an offsite location in accordance with the USFWS guidelines (USFWS, 1999) would reduce this long-term effect.

Beneficial Effects

In accordance with the compensatory conservation measures described in Section 2, valley elderberry longhorn beetle habitat would be planted at an offsite location, or credits would be secured from a mitigation bank to compensate for removing and trimming elderberry shrubs in the Action Area. The ratio of required plantings to the number of elderberry stems affected is weighted heavily toward required plantings; thus, much more habitat would be created or secured from a mitigation bank than would be affected by activities related to implementing the Proposed

Action. This action would provide more suitable habitat within the range of valley elderberry longhorn beetle than currently exists in the Action Area.

5.2 Effects of Interrelated and Interdependent Actions

Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no significant independent utility apart from the action that is under consideration (50 CFR 402.02). Interrelated and interdependent actions are activities that would not occur “but for” the proposed action (50 CFR 402.02).

The Proposed Action being considered is part of the Housing Authority of the County of Sacramento’s (HACOS’s) Asset Repositioning Strategy and Guiding Principles development strategy focusing on current and future budget shortfalls as a result of reductions in federal funding for public housing operations and maintenance. The strategy called for, among other things, the upgrading of existing physical public housing stock and the decreased reliance on federal funding sources by leveraging private funding (debt and equity) and other sources such as grants and local funds. The existing Twin Rivers Community Housing Complex (then known as Dos Rios) was identified as a priority “Action Development” under this strategy.

None of the other projects identified in HACOS’s Asset Repositioning Strategy and Guiding Principles development strategy would be considered interrelated and/or interdependent actions because they do have significant independent utility apart from the Proposed Action that is under consideration (50 CFR 402.02). Additionally, they could occur with or without the Proposed Action. As a result, no interrelated or interdependent actions that could affect Federally listed species covered in this BA have been identified in relation to the Proposed Action.

5.3 Cumulative Effects

Cumulative effects include those of future State, tribal, local, or private actions that are reasonably certain to occur in the action area under consideration (50 CFR 402.02). The ESA requires USFWS and NMFS to evaluate the cumulative effects of the Proposed Action on listed species and designated critical habitat, and to consider cumulative effects in formulating biological opinions (USFWS and NMFS 1998). The ESA defines cumulative effects as “those effects of future State or private actions, not involving Federal activities, that are reasonably certain to occur within the action area” of the proposed action subject to consultation (USFWS and NMFS 1998). Future Federal actions that are unrelated to the Proposed Action are not considered in this section because they require separate consultation pursuant to Section 7 of the ESA. Federal actions, including activities that would require a permit under Clean Water Act Section 404, are, therefore, not included. For the purposes of this BA, the area of cumulative effects analysis is defined as the southern Sacramento Valley.

A number of other commercial and private activities, including urban and rural development, could potentially affect listed species in the southern Sacramento Valley. Ongoing non-Federal activities that affect valley elderberry longhorn beetle would likely continue in the short and long term, at intensities similar to those of recent years.

Potential cumulative effects on valley elderberry longhorn beetle could include dumping of domestic and industrial garbage; increased discharge of pesticides, herbicides, and other contaminants; and conversion of riparian areas for urban and agricultural development. As described in the previous discussions, the effects associated with implementing the Proposed Action would be reduced with the incorporation of the compensatory mitigation measures described in Section 2. Implementing compensatory mitigation measures would further reduce the potential effect of the Proposed Action on valley elderberry longhorn beetle. Implementing these measures would fully compensate for the potential effects of implementing the Proposed Action on the species; therefore, implementing the Proposed Action would not contribute to cumulative effects on the species.

SECTION 6

Summary of Effects Determinations

It is our determination that construction and operation of the Proposed Action would not affect the following species.

- California red-legged frog (*Rana draytonii*) (T)
- California tiger salamander (*Ambystoma californiense*), (T)
- Vernal pool fairy shrimp (*Branchinecta lynchi*) (T)
- Vernal pool tadpole shrimp (*Lepidurus packardi*), (E)
- Delta smelt (*Hypomesus transpacificus*) (T)
- Steelhead (*Oncorhynchus (=salmo) mykiss*) (T)
- Giant garter snake (*Thamnophis gigas*) (T)

It is our determination that the construction of the Proposed Action may affect, and is likely to adversely affect the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). However, with implementation of the proposed conservation measures, the level of take would be small and would be fully compensated with replanting of elderberry shrubs or the purchase of valley elderberry longhorn beetle credits from an approved mitigation bank. As a result, implementation of the Proposed Action would not jeopardize the continued existence of the species.

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SECTION 7

References, and Report Preparers

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Appendix A

Federal Endangered and Threatened Species with Potential to Occur

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United States Department of the Interior



FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office

FEDERAL BUILDING, 2800 COTTAGE WAY, ROOM W-2605

SACRAMENTO, CA 95825

PHONE: (916)414-6600 FAX: (916)414-6713

Consultation Code: 08ESMF00-2016-SLI-1398

April 29, 2016

Event Code: 08ESMF00-2016-E-03019

Project Name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2)

of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Official Species List

Provided by:

Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Consultation Code: 08ESMF00-2016-SLI-1398

Event Code: 08ESMF00-2016-E-03019

Project Type: ** OTHER **

Project Name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Project Description: The site is comprised of two areas totaling approximately 24.2 acres that are separated from one another by North 12th Street. The larger and westernmost area is comprised of a single parcel, approximately 21 acres in size. It is generally bounded by Dos Rios Street to the west, Richards Boulevard to the northeast, Louise Street to the east, and North 12th Street to the south. The second and easternmost area is separated from the first by intervening parcels and North 12th Street. It is comprised of six parcels totaling approximately 3.2 acres.

The project is comprised of the following components: 1.) redevelop the Twin Rivers Community Housing Complex west of North 12th Street, 2.) construct the Twin Rivers Community Housing Expansion Area east of N 12th Street, and 3.) develop the new Dos Rios Light Rail Station on the eastern side of N 12th Street, adjacent to the expansion area.

The redevelopment of the existing housing complex and construction of the expansion area housing east of North 12th Street would take approximately seven years, beginning in 2017 with anticipated project completion in 2023. Acquisition, infrastructure availability, market conditions, demolition, and the timing of the new Dos Rios light rail station construction would have an impact on the phasing of physical development of the housing facilities. On the Twin Rivers Community Housing Expansion Area parcels, it is likely that the new light rail station would be constructed prior to the construction of the adjacent housing.

The project would be separated into phases to meet market conditions and also to potentially



United States Department of Interior
Fish and Wildlife Service

Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

facilitate efficient relocation of residents from existing units into new replacement housing as the existing units are demolished.

Physical construction of the housing facilities would occur in typical fashion, with demolition occurring first, followed by site preparation and grading, construction of roadways and utility improvements, and then construction of the housing units. Construction of the housing units would begin with the pouring of foundations, followed by framing and installation of rough electrical, plumbing, and heating, ventilation, and cooling (HVAC) components. Interior and exterior walls would be finished, followed by final fitting out of interior components and exterior landscaping.

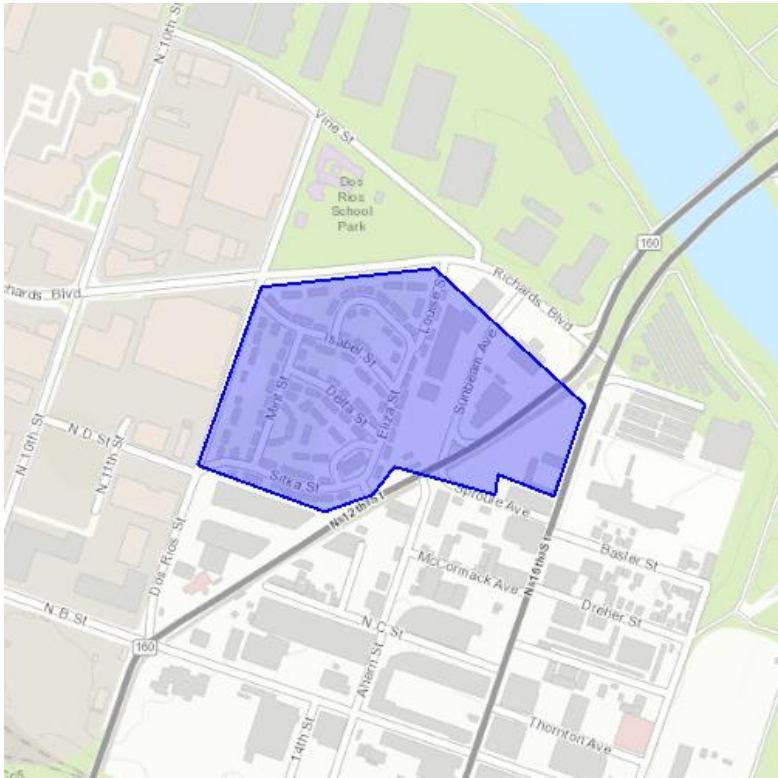
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-121.48404225070406 38.595159328556164, -121.48113012281101 38.59539889825305, -121.478624188494 38.59361397217753, -121.4791300527213 38.592416085914444, -121.4800649636527 38.59271553849741, -121.48013394998998 38.59244602288627, -121.48181987944552 38.59281734041137, -121.4821724288413 38.59245197690835, -121.48296947383642 38.592218435357516, -121.48510751660069 38.59283536949265, -121.48404225070406 38.595159328556164)))

Project Counties: Sacramento, CA



Endangered Species Act Species List

There are a total of 8 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	Status	Has Critical Habitat	Condition(s)
California red-legged frog (<i>Rana draytonii</i>) Population: Entire	Threatened	Final designated	
California tiger Salamander (<i>Ambystoma californiense</i>) Population: U.S.A. (Central CA DPS)	Threatened	Final designated	
Crustaceans			
Vernal Pool fairy shrimp (<i>Branchinecta lynchi</i>) Population: Entire	Threatened	Final designated	
Vernal Pool tadpole shrimp (<i>Lepidurus packardi</i>) Population: Entire	Endangered	Final designated	
Fishes			
Delta smelt (<i>Hypomesus transpacificus</i>) Population: Entire	Threatened	Final designated	
steelhead (<i>Oncorhynchus (=salmo)</i>)	Threatened	Final designated	



United States Department of Interior
Fish and Wildlife Service

Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

<i>mykiss</i> Population: Northern California DPS			
Insects			
Valley Elderberry Longhorn beetle (<i>Desmocerus californicus dimorphus</i>) Population: Entire	Threatened	Final designated	
Reptiles			
Giant Garter snake (<i>Thamnophis gigas</i>) Population: Entire	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: Twin Rivers Transit-Oriented Development and Light Rail Station Project

Critical habitats that lie within your project area

There are no critical habitats within your project area.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington, D.C. 20240

In Reply Refer To:
FWS/AES/OCHR/006577

Memorandum

APR 17 2002

To: Regional Directors, Region 1, 2, 3, 4, 5, 6, and 7
Manager, California - Nevada Operations Office

From: **Deputy** Director **/s/ Marshall P. Jones**

Subject: Endangered Species Act Consultation Compliance with "Responsible Entities" under U. S. Department of Housing and Urban Development's Assumption Authority (24 CFR Part 58)

The purpose of this memorandum is to clarify Service policy regarding consultation under section 7 of the Endangered Species Act for certain projects authorized by the Department of Housing and Urban Development. Under 12 HUD Programs, States, Indian Tribes, units of general local government and certain insular areas (Guam, the Northern Mariana Islands, the Virgin Islands, American Samoa, and Palau) are required to assume, or in some cases may choose to assume, the environmental compliance responsibilities that would otherwise be the responsibility of HUD. Nine of the programs for which these "responsible entities" may assume responsibilities are described in regulations found at 24 CFR Part 58. The three additional programs that by more recently-enacted statutory provisions are subject to the environmental provisions in Part 58 are: (1) assistance under the Native American Housing Assistance and Self-Determination Act of 1996, (2) loan guarantees for Indian housing under Section 184 of the Housing and Community Development Act of 1992, and (3) Housing Opportunities for Persons with AIDS grants under the AIDS Housing Opportunity Act. The regulations specifically mention that section 7 of the Endangered Species Act is one of the laws for which responsible entities may assume responsibility for compliance.

According to HUD regulations and statutes, when eligible general government applicants apply for and accept HUD money under 24 CFR Part 58 programs, they agree to become the "responsible entity." These local governments are directly responsible for ensuring compliance with those Federal environmental laws described in the regulation, and as such, they constitute the "Federal agency" responsible for consulting with the Service under section 7 of the Endangered Species Act. However, Indian Tribes under NAHASDA and Section 184 have the option of agreeing to be the "responsible entity" or having HUD retain environmental responsibility. The unit of general local government is requested to be the "responsible entity" in instances when the applicant is not a governmental entity.

Service offices should regard all requests for section 7 consultation from "responsible entities" as official requests submitted by a Federal action agency as defined under the interagency consultation regulations at 50 CFR part 402. Both HUD and the local government entity will submit certification letters to the Field Office with the request for section 7 consultation (see attachment) to reaffirm the status of the local government entity as the "responsible entity" under part 58. In addition, any questions about who the responsible entities are for a particular geographic area should be directed to the appropriate Community Planning and Development Director. A list of HUD regional/state contacts and a list of CPD Directors are attached.

According to HUD's regulations (24 CFR 58.5) and statutes, the "responsible entity's" assumption of responsibility for compliance with the Endangered Species Act, "particularly Section 7," includes both substantive as well as procedural compliance with section 7. Part 58 and the assumption provisions in HUD's statutes make the responsible entity the responsible Federal official at the project level for each project for which a Request for Release of Funds and certification is submitted and approved. For any activity that may require compliance with the Endangered Species Act or any of the other listed Federal environmental compliance provisions, "responsible entities" must give public notice *and* submit a request for release of funds to HUD along with a certification that they have fully carried out the environmental responsibilities they have assumed, and that they agree to Federal court jurisdiction for enforcement of these responsibilities. The Service should be notified by the "responsible entity" that a request for release of funds has been submitted to HUD for any action that was reviewed for section 7 compliance.

If a Federal agency makes a finding that the project is unsatisfactory from the standpoint of environmental quality, HUD may determine not to release any funds for the project or exercise other corrective measures. In the event that a "responsible entity" fails to follow the procedural and substantive requirements of section 7, the Service should notify HUD that the responsible entity has not satisfied the requirements of the Endangered Species Act. In particular, if the Service makes a jeopardy or adverse modification determination, a copy of the biological opinion should be provided to the appropriate CPD Director with a request for HUD not to release the funds without first coordinating with the Services (see attachment no. 4). In addition, if the responsible entity is not cooperative in implementing the Reasonable and Prudent Measures or the project is modified from that described in the biological opinion, it may be necessary to work with the appropriate CPD Director as HUD has continuing monitoring responsibilities.

Please direct any questions concerning this matter to Renne Lohofener, Chief, Division of Consultation, Habitat Conservation Planning, Recovery, and State Grants at (703) 358-2171.

Attachments

cc: 3012-MIB-FWS/Directorate Reading File
3242-MIB-FWS/AES RF
420-ARLSQ-FWS/TE
420-ARLSQ-FWS/TE BCH Ctrl #006577
420-ARLSQ-FWS/TE RF

FWS/TE:MMorgan:emj:2/19/02:703-358-2106:S:\BCH\HUD\HUD final v3.doc
Revised:MMorgan:emj:04/09/02

[CPD Director]
Field Housing and Urban Development Office

Re: Notification of Jeopardy/Adverse Modification determination by the Service on [project]

Dear [CPD Director]:

The U.S. Fish and Wildlife Service/National Marine Fisheries Service has determined that implementation of the proposed [project] by [responsible entity] will likely jeopardize the continued existence of [one or more species] and/or result in destruction or adverse modification of critical habitat. We have provided [responsible entity] the following reasonable and prudent alternatives:[list]. Because the biological opinion has found [jeopardy/destruction or adverse modification of critical habitat] the responsible entity is required to notify the Service of its final decision on the implementation of the reasonable and prudent alternatives.

We request that HUD not release the funds for the proposed project until the responsible entity has notified the Service of its intentions and HUD has coordinated the release with the Service.

If you have any questions or comments please contact [Name] at [number].

Sincerely,

Field Supervisor

From: Douglas, Lily [<mailto:>]

Sent: Wednesday, October 12, 2016 11:47 AM

To: Dana Mahaffey <DMahaffey@cityofsacramento.org>

Cc: Kathleen.A.McNulty@hud.gov

Subject: Additional Information for the Consultation on the Twin Rivers TOD and Light Rail Station Project

Dear Ms. Mahaffey,

In reviewing the biological assessment for the Twin Rivers Transit-Oriented Development and Light Rail Station Project, I have a question regarding your proposed conservation measures. The BA says that 2.8 valley elderberry longhorn beetle habitat credits will be purchased; however, the BA also states that 4 elderberry plants will be transplanted. As each habitat credit is able to accept a single transplant, the proposed credit purchase is not adequate to support the proposed transplants. Have you been in contact with a conservation banking firm regarding this proposal? Please clarify your proposed conservation measures in order to minimize the proposed project's effects to the beetle.

Thank you,

Lily Douglas

Fish and Wildlife Biologist, Sacramento Valley Division

Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service

2800 Cottage Way, Suite W-2605

Sacramento, CA 95825

(916) 414-6628

lily_douglas@fws.gov

From: Sarah Cannon
To: ["Douglas, Lily"](#)
Cc: [Luke Evans](#); DMahaffey@cityofsacramento.org; [Kellie Berry](#); Kathleen.A.McNulty@hud.gov
Subject: RE: Additional Information for the Consultation on the Twin Rivers TOD and Light Rail Station Project
Date: Tuesday, December 13, 2016 10:28:00 AM

Hi Lily –

For the Twin Rivers project mitigation, we propose the purchase of 4.8 mitigation credits for the mitigation of 4 stems measuring >1" to <=3" and 2 stems measuring >3" to 5". Our proposed mitigation does not include transplanting the shrubs located onsite, but does include the purchase of 4.8 mitigation credits which encompasses 24 elderberry seedling plantings, 24 associated native plants at a mitigation bank.

Thank you,
Sarah

Sarah Cannon
ESA | Environmental Science Associates
2600 Capitol Avenue, Suite 200
Sacramento, CA 95816
916.564.4500 main | 916.564.4501 fax
916.231.1202 direct | 916.335.1052 cell
scannon@esassoc.com | www.esassoc.com

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From: Douglas, Lily [mailto:lily_douglas@fws.gov]
Sent: Thursday, October 20, 2016 2:11 PM
To: Sarah Cannon
Cc: Luke Evans; DMahaffey@cityofsacramento.org; Kellie Berry; Kathleen.A.McNulty@hud.gov
Subject: Re: Additional Information for the Consultation on the Twin Rivers TOD and Light Rail Station Project

Hi Sarah,

The 1999 guidelines require additional plantings if transplanting will not occur. We normally see the number of credits increased 3 times to offset the lack of transplanting. Therefore, please reconsider your proposed conservation measures and provide us with measures that appropriately minimize the proposed project's effects to the beetle.

In addition, I have to express some confusion on the significant differences between your email and the information provided in the biological assessment. I hope that we will be provided with complete and accurate information regarding the proposed conservation measures and environmental baseline going forward.

Thank you,
Lily

--

Lily Douglas
Fish and Wildlife Biologist, Sacramento Valley Division
Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento, CA 95825

(916) 414-6628
lily_douglas@fws.gov

On Tue, Oct 18, 2016 at 3:48 PM, Sarah Cannon <SCannon@esassoc.com> wrote:

Dear Lily Douglas,
 I am working with Dana Mahaffey at the City of Sacramento on the Twin Rivers TOD and Light Rail Station project.

Proposed conservation for this project is to purchase VELB mitigation credits from a conservation banking firm in lieu of transplanting shrubs. The elderberry shrubs onsite are in poor condition likely due to annual vegetation maintenance (i.e., trimming). The City proposes to purchase mitigation credits to offset project impacts pursuant to minimization ratios set forth under the 1999 VELB programmatic BO.

Within the Action Area there are 11 shrubs with a total of four stems measuring between 1-3" and two stems measuring 3-5". The shrubs are not located in the riparian zone, nor are there exit holes present on the stems. Per the 1999 conservation guidelines, the City proposes mitigate for the loss of stems measuring over 1" by purchasing credits to plant eight elderberry shrubs, and eight associated native species with a minimum of 0.07 acres of planting area.

We have been in contact with Westervelt Ecological Services and Wildlands conservation banking firms who have both confirmed they have available mitigation credits that cover the area in the City of Sacramento.

		Exit	Stem Qty	1999 Elderberry Mitigation	Needed	1999 Associate Mitigation	Needed
Location	Stems	Holes	Seen	Ratio	Elderberry	Ratio	Associates
Non-Riparian	> 1" to <= 3"	No	4	1	4	1	4
Non-Riparian	> 3" to < 5"	No	2	2	4	1	4
TOTALS					8		8
Acres				0.07			

Please let us know if you have additional questions. Thank you,
 Sarah

Sarah Cannon
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United States Department of the Interior



In Reply Refer to:
08ESMF00-
2016-F-2198-1

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

DEC 28 2016

Ms. Dana Mahaffey
Associate Planner
City of Sacramento
300 Richards Boulevard, 3rd Floor
Sacramento, California 95811

Subject: Formal Consultation on the Proposed Twin Rivers Transit Oriented Development Project, Sacramento County, California

Dear Ms. Mahaffey:

This letter is in response to the City of Sacramento's (City) undated request for initiation of formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Twin Rivers Transit Oriented Development Project (proposed project), in Sacramento County, California. Your request was received by the Service on September 6, 2016; however, complete information was not received until December 13, 2016. At issue are the proposed project's effects on the federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle). This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act) and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR §402).

The federal action we are consulting on is the construction of a new mixed-use community and light rail station by the City in coordination with the U.S. Department of Housing and Urban Development (HUD). The proposed project is receiving federal funding through HUD's Choice Neighborhoods Initiative. Pursuant to HUD's Assumption Authority (24 CFR §58), the City has agreed to become the "responsible entity" and has assumed HUD's responsibilities as the lead agency under the Act. The Service recognized this authority in the April 17, 2002, memorandum (2002 memo; Service File Number FWS/AES/OCHR/006577).

Pursuant to 50 CFR §402.12(j), you submitted a biological assessment for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, and is likely to adversely affect the beetle. The proposed project is not within designated or proposed critical habitat for any federally-listed species.

In considering your request, we based our evaluation on the following: (1) your undated letter requesting initiation of formal consultation and the enclosed September 2016 *Twin Rivers Transit-Oriented Development and Light Rail Station Project Biological Assessment for Consultation with the U.S. Fish and Wildlife Service* (biological assessment), prepared by ESA (consultant); (2) email correspondence between the Service, the City, and HUD; and (3) other information available to the Service.

Consultation History

- September 6, 2016: The Service received the undated letter from the City requesting initiation of formal consultation with the September 2016 biological assessment enclosed.
- September 29, 2016: The Service emailed the City and HUD requesting the certification letter from HUD described in the 2002 memo.
- October 5, 2016: The Service received the September 30, 2016, certification letter from HUD.
- October 12, 2016: The Service sent an email requesting additional information on the proposed project's conservation measures for the beetle.
- December 13, 2016: The Service received an email from the consultant clarifying the conservation measures for the beetle. This date also confirms the receipt of all of the complete information in order for consultation to begin.

The remainder of this document provides our biological opinion on the effects of the proposed project on the beetle.

BIOLOGICAL OPINION

Description of the Action

The proposed project is located on two properties along North 12th Street in the City of Sacramento. The larger 21-acre property (west property) is generally bound by North 12th Street to the south, Dos Rios Street to the west, Richards Boulevard to the northeast, and Louise Street to the east. The second 3.2-acre property (east property) is located across North 12th Street. The west property includes the existing Twin Rivers Community Housing Complex. The east property is currently undeveloped. The proposed project will develop 486 new residential units, replacing the existing housing on the west property and constructing a multi-family apartment building on the east property. In addition, the existing light rail tracks adjacent to the east property will be realigned to the southeast and a new raised platform station will be constructed.

The proposed project area contains 11 elderberry plants (*Sambucus* sp.), the sole host plant for the beetle. The elderberry plants appear to have been routinely cut back by the current landowner. None of the elderberry plants contain beetle exit holes. Four of the elderberry plants have stems greater than or equal to 1 inch in diameter at ground level. All of the elderberry plants will be removed due to proposed project construction.

Conservation Measure

The City is proposing to minimize effects of the proposed project by purchasing beetle conservation credits, as described in the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (Service 1999). The credits will be purchased from a Service-approved conservation bank with a service area covering the proposed project. The City proposes to compensate for the four plants removed as described in Table 1 below, including an increase in credits due to the fact that the elderberry plants will not be transplanted. This measure is considered part of the proposed action evaluated by the Service in this biological opinion.

Table 1: Compensation Ratios for Affected Elderberry Plants

Riparian	Elderberry Stem Size	Exit Holes	Number of Stems	Seedling Ratio	Number of Replacement Elderberries	Associated Native Ratio	Number of Associated Seedlings
No	>1" and <3"	No	4	1:1	4	1:1	4
No	>3" and <5"	No	2	2:1	4	1:1	4
Total Stems Affected			6				
Total Replacement Plantings (x3)*					24		24
Conservation Credits Proposed for Plantings (total replacement plantings/10)						4.8	
* Proposed increase in plantings due to the elderberry plants not being transplanted. Note: This information is summarized from email correspondence between the Service and the consultant.							

Action Area

The action area is defined in 50 CFR §402.02 as, “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” For the proposed project, the action area encompasses the entire project site and all areas up to 165 feet from the construction footprint in which noise from construction activities is expected to exceed ambient levels (derived from Service 2006).

Analytical Framework for the Jeopardy Determination

Section 7(a)(2) of the Endangered Species Act requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. “Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this biological opinion considers the effects of the proposed federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species. It relies on four components: (1) the *Status of the Species*, which describes the rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which analyzes the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed federal action and the effects of any interrelated or interdependent activities on the species; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the species.

Status of the Species

For the most recent comprehensive assessment of the range-wide status of the beetle, please refer to the *Withdrawal of the Proposed Rule To Remove the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife* (Service 2014). Threats discussed in the withdrawal continue to act on the beetle, with loss of riparian habitat being the most significant effect. While there continue to be losses of beetle habitat throughout its range, to date no project has proposed a level of effect for which the Service has issued a biological opinion of jeopardy for the beetle.

Environmental Baseline

Due to the fact that the life cycle of the beetle takes one or two years to complete, during which it spends most of its life in the larval stage living within the stems of elderberry plants, it is not possible to know if the plants in the action area are inhabited by the beetle. The closest known occurrence of the beetle in the California Natural Diversity Database (CNDDDB) is approximately 250 meters from the action area along the American River, where beetle exit holes were located on the stems of elderberry plants on a mitigation site (CNDDDB 2016). The Sacramento Zone of critical habitat for the beetle is approximately 0.5 mile away across the American River, where adult beetles have been observed. The proximity to known occurrences increases the likelihood that the stems greater than or equal to 1 inch in diameter at ground level are inhabited by the beetle. The four elderberry plants with stems greater than or equal to 1 inch in diameter at ground level in the proposed project's action area represent a very small proportion of habitat available throughout the full range of the beetle and are not located within intact riparian habitat.

Effects of the Action

All of the elderberry plants, including the four plants with stems equal to or greater than 1 inch at ground level, will be removed. Due to the poor condition of the plants, they will not be transplanted. Any beetle larvae occupying the stems will be killed when the plants are destroyed.

As noted previously in the *Description of the Action* section, the City has also proposed conservation measures, including the commitment to provide compensatory habitat as a condition of the action. This compensatory habitat is intended to minimize the effect on the beetle of the project's anticipated incidental take, resulting from the permanent loss of habitat described above. The compensatory habitat proposed will be in the form of beetle conservation credits at a Service-approved conservation bank.

This component of the action will have the effect of protecting and managing lands for the species' conservation in perpetuity. The compensatory lands will provide suitable habitat for breeding, feeding, or sheltering commensurate with or better than habitat lost as a result of the project. Providing this compensatory habitat as part of a relatively large, contiguous block of conserved land may contribute to other recovery efforts for the beetle.

Cumulative Effects

Cumulative effects include the effects of future state, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. During this consultation, the Service did not identify any future non-federal actions that are reasonably certain to occur in the action area of the proposed project.

Conclusion

After reviewing the current status of the beetle, the environmental baseline for the action area, the effects of the proposed project, and the cumulative effects, it is the Service's biological opinion that the Twin Rivers Transit Oriented Development Project, as proposed, is not likely to jeopardize the continued existence of the beetle. The Service reached this conclusion because the project-related effects to the beetle, when added to the environmental baseline and analyzed in consideration of the

lack of cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of the species. The elderberry plants to be removed represent a very small proportion of habitat available throughout the full range of the beetle and are not located within intact riparian habitat. In addition, the compensatory habitat proposed will ensure that habitat for the species will be protected and managed in perpetuity.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service regulations at 50 CFR §17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the City so that they become binding conditions of any grant or permit issued, as appropriate, for the exemption in section 7(o)(2) to apply. The City has a continuing duty to regulate the activity covered by this incidental take statement. If the City (1) fails to assume and implement the terms and conditions or (2) fails to require any grantees or permittees to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permits or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the City must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(i)(3)]

Amount or Extent of Take

The Service anticipates that incidental take of the beetle will be difficult to detect due to the fact that it is not possible to know how many larvae inhabit the four elderberry plants providing habitat for the beetle. Removal and transplantation of the elderberry plants could result in the harm and mortality of all larvae inhabiting the stems. Therefore, the Service is authorizing incidental take to the proposed action as the harm of all larvae within the four elderberry plants with stems greater than or equal to 1 inch in diameter at ground level.

Upon implementation of the following *Reasonable and Prudent Measures*, incidental take of the beetle associated with the Twin Rivers Transit Oriented Development Project will become exempt from the prohibitions described in section 9 of the Act. No other forms of take are exempted under this opinion.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the beetle.

Reasonable and Prudent Measures

All necessary and appropriate measures to avoid or minimize effects to the beetle resulting from implementation of this project have been incorporated into the project's proposed conservation measure. Therefore, the Service believes the following Reasonable and Prudent Measure is necessary and appropriate to minimize incidental take of the beetle:

1. The conservation measure for the beetle, as described in the biological assessment and restated here in the *Description of the Action* section of this biological opinion, will be fully implemented and adhered to. Further, this Reasonable and Prudent Measure will be supplemented by the Terms and Conditions below.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the City must ensure compliance with the following terms and conditions, which implement the Reasonable and Prudent Measure described above. These terms and conditions are nondiscretionary.

1. The City will include full implementation and adherence to the conservation measure as a condition of any permit or contract issued for the proposed project.
2. The City will provide a copy of the completed bill of sale and payment receipt to the Service upon the purchase of beetle conservation credits.
3. In order to monitor whether the amount or extent of incidental take anticipated from implementation of the proposed project is approached or exceeded, the City will adhere to the following reporting requirement. Should this anticipated amount or extent of incidental take be exceeded, the City must immediately reinstate formal consultation, as per 50 CFR §402.16.
 - a. For those components of the action that will result in habitat degradation or modification whereby incidental take in the form of harm is anticipated, the City will provide a precise accounting of the elderberry plants impacted to the Service after the completion of construction. This report will also include any information about changes in project implementation that result in habitat disturbance not described in the *Description of the Action* and not analyzed in this biological opinion.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the Twin Rivers Transit Oriented Development Project in Sacramento County, California. As provided in 50 CFR §402.16, reinitiation of formal consultation is required and will be requested by the federal agency or by the Service where discretionary federal agency involvement or control over the action has been retained or is authorized by law and:

- (a) If the amount or extent of taking specified in the incidental take statement is exceeded;
- (b) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- (c) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or
- (d) If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have questions regarding this biological opinion, please contact Lily Douglas, Fish and Wildlife Biologist (lily_douglas@fws.gov), or Kellie Berry, Chief, Sacramento Valley Division (kellie_berry@fws.gov) at the letterhead address, (916) 414-6631, or by e-mail.

Sincerely,



 Jennifer M. Norris
Field Supervisor

cc:

Ms. Kathleen McNulty, U.S. Department of Housing and Urban Development, San Francisco, CA

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