Section 3.3 Biological Resources

Introduction

This section discusses the condition of existing biological resources and describes applicable regulations, adverse effects and mitigation measures of the analyzed alternatives, with regards to these resources. The discussion is based on findings of prior studies conducted in the 2005 FEIR and 2007 SEIR, as well as an updated list of plant and animal species. This list is included in the Capitol Expressway Corridor Background Report, which is available upon request.

Affected Environment

The affected environment includes regulations relevant to biological resources, as well as the biological habitats and potential special-status species that occur in the study area. These are discussed below.

REGULATORY SETTING

Federal and state regulations apply to the proposed alternatives. Although VTA is not subject to local ordinances and policies, VTA accommodates them to the extent practicable. Detailed descriptions of the following regulations are available in the Capitol Expressway Corridor Background Report.

EXISTING CONDITIONS

Reconnaissance field surveys were conducted in October 16, 2001, November 21, 2002 and October 19, 2006. During these visits, biologists documented existing biological resources and habitats in and near the Capitol Expressway Corridor. This encompassed all areas of disturbance associated with the proposed alternatives, including any properties that would be acquired outside the existing right of way. In addition, biologists surveyed areas adjacent to the defined study area that contained habitats with potential to support special-status species (plants or animals). For the purposes of this section, these areas are referred to as the "study area vicinity."

Although no focused surveys for special-status species or jurisdictional wetland delineations were conducted, habitats that may support these resources were noted. Waters that are potentially under the regulatory jurisdiction of the U.S. Army Corps of Engineers or the State of California were drawn onto engineering plan sheets (scale: 1 inch = 100 ft.).

The following sections describe existing plant and wildlife resources along the Capitol Expressway Corridor. Creek crossings and vacant lots on, under, or adjacent to Capitol Expressway that may provide habitat for wildlife are identified and discussed. The remaining portions of corridor contain developed hardscape and

landscaping associated with urbanized development, such as sidewalks, commercial buildings, and private residences, and are not included in the following discussion.

Biological Habitats

Ruderal and aquatic habitats occur in the study area and some freshwater marsh occurs adjacent to the study area. Habitats were classified using Holland (1986) and Sawyer and Keeler-Wolf (1995). Table 3.3-1 summarizes acreages by habitat type within the study area. Figures 3.3-1a and 3.3-1b graphically depicts the distribution of these habitat types.

Table 3.3-1. Biological Habitats within the Study Area

Habitat Type (Location)	Approximate Acreage in Study Area
Freshwater Marsh	
Eastridge Loop to Tully Road*	0.00
Tully Road to Cunningham Avenue	0.00
Cunningham Avenue to Ocala Avenue	0.00
Ocala Avenue to Story Road	0.00
Story Road to Wilbur Avenue	0.00
Total Freshwater Marsh	**0.00**
Ruderal	
Eastridge Loop to Tully Road	0.26
Tully Road to Cunningham Avenue	3.94
Cunningham Avenue to Ocala Avenue	3.77
Ocala Avenue to Story Road	0.00
Story Road to Wilbur Avenue	0.13
Total Ruderal	**8.10**
Aquatic	
Eastridge Loop to Tully Road	0.00
Tully Road to Cunningham Avenue	0.00
Cunningham Avenue to Ocala Avenue	0.00
Ocala Avenue to Story Road	0.00
Story Road to Wilbur Avenue	0.08
Total Aquatic	**0.08**

* Freshwater marsh is located in a portion of the 5.74 acres that comprise the entire channel

Freshwater Marsh

Freshwater marsh habitat adjacent to the study area supports perennial emergent species, including cattails (*Typha* spp.) and bulrushes (*Scirpus* spp.). Freshwater marsh is found in limited amounts within the 5.7 acres of the constructed channel of

Figure 3.3-1a
Biological Habitats in the Project Vicinity

Graphics... 012701 (7-10)

Figure 3.3-1b
Biological Habitats in the Project Vicinity

Thompson Creek (Table 3.3-1, Figures 3.3-1a and 3.3-1b), located between Tully Road and Eastridge Loop.

Ruderal

Approximately 8.1 acres of ruderal habitat occurs in disturbed areas throughout the study area (Table 3.3-1, Figures 3.3-1a and 3.3-1b) and is typically dominated by nonnative grass species, including Italian ryegrass, orchardgrass (*Dactylus glomerata*), and wild oat as well as bull thistle (*Cirsium vulgare*), and non-native trees such as California pepper (*Schinus molle*), black walnut (*Juglans* sp.), olive (*Olea europaea*), and tree-of-heaven (*Alianthus altissima*).

Ruderal habitat is found along roads, in vacant areas between development, and in the channels and upland areas of Silver Creek (Figures 3.3-1a and 3.3-1b). Some of the bare areas with low vegetation showed evidence of ground squirrel activity. These areas may support suitable habitat for the burrowing owl (*Athena cunicularia*), and upland habitat for the California red-legged frog (*Rana draytonii*). Suitable habitat for these species is defined in detail under *Special-Status Species* below.

Aquatic

Aquatic habitat in the study area occurs in the channels of Silver Creek, and in the study area vicinity at Thompson Creek. Small patches of aquatic vegetation may occur on sediment deposits in the constructed channels of Silver and Thompson Creeks but they do not support riparian vegetation. Special-status species that could occur in aquatic habitat include California red-legged frog (*Rana aurora draytonii*), California tiger salamander (*Abystoma californiense*), and western pond turtle (*Actinemys marmorata*).

Silver Creek

Silver Creek is a modified concrete channel that flows beneath Capitol Expressway at the northern end of the study area. Approximately 0.08 acre of this creek is located within the study area (Table 3.3-1). Past channel modifications in the creek have generally resulted in poor habitat conditions for fish, especially salmonids (i.e., steelhead and chinook salmon). Where Silver Creek flows beneath Capitol Expressway (refer to Figure 3.3-2), the wetted channel is approximately 6–8 inches deep and approximately 8 feet wide, and fills the entire bottom of the channel. The channel is concrete-lined and reinforced in some areas with rock, and provides poor habitat conditions. The channel is bordered by ruderal vegetation and development on both sides, with an 8- to 10-foot maintenance road between the top of the concrete channel and development.

Thompson Creek

Thompson Creek is a modified channel that flows parallel to Capitol Expressway for approximately 0.5 mile within the study area vicinity. Past channel modifications in

Thompson Creek have generally resulted in poor habitat conditions for fish, especially salmonids. Thompson Creek is flanked on both sides by earthen berms, and the width of the constructed channel is 75–100 feet. The 4- to 8-foot-wide creek bed is located at the center of the channel and is slightly incised (refer to Figure 3.3-3). At the time of the surveys, the southern section of the creek still held standing water in its scoured areas, but most of the creek bed was dry. However, the northern section of the creek contained water in a channel approximately 3–6 feet wide. The substrate of both of these sections is gravelly.

Species present on the creek banks include willows, thistles, grasses such as ripgut brome (*Bromus diandrus*) and creeping wild-rye (*Leymus triticoides*), and perennial pepperweed (*Lepidium latifolium*). Portions of the creek channel support cattails as well. A large amount of trash was present in the creek channel at the time of the surveys, indicating the potential for poor water quality. The presence of algal mats on the banks and in backwater areas also suggests that the water is typically slow-moving and warm.

Special-Status Species Known to Occur or With Potential to Occur

Biologists compiled lists of special-status plant and wildlife species known to occur or with the potential to occur within the study area. These were compiled from information provided in the California Natural Diversity Database (CNDDB), California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants and California Wildlife Habitat Relationships system. These lists are included in the Capitol Expressway Corridor Background Report.

Special-Status Plant Species

Based on existing information and field surveys, no special-status plant species are expected to occur in the Capitol Expressway Corridor. The areas within the corridor are highly disturbed and do not provide suitable habitat for any of the special-status plant species.

Special-Status Wildlife Species

Based on known species distribution, habitat requirements, and the results of the 2001, 2002 and 2006 field surveys, the following special-status wildlife species may occur in the study area: California red-legged frog, California tiger salamander, western pond turtle, burrowing owl, nesting raptors, and special-status bat species. These species are described below.

California Red-Legged Frog

California red-legged frog (CRLF) is federally listed as threatened and is a state species of concern. The study area is not located within an area designated as critical habitat for the CRLF. The small streams may function as dispersal corridors for this species when they contain water. One record of this species occurs within the Coyote

Existing view of Silver Creek channel

Graphics … 01277.01 (12-10)

Source: ICF International

Figure 3.3-2
Silver Creek

Existing view of Thompson Creek.

Graphics … 01277.01 (9-10)

Source: ICF International

Figure 3.3-3
Thompson Creek

Creek watershed approximately 3.7 miles northeast of the study area, in Alum Rock Park (California Natural Diversity Database 2010). The area between that nearest occurrence and the project location is densely urbanized and not suitable for CRLF. As a result there is no suitable habitat in the study area. The potential for occurrence of CRLF within the study area is considered to be low.

California Tiger Salamander

California tiger salamander (CTS) is federally listed as threatened and is a state candidate for listing (Threatened). Breeding habitat requirements for the CTS are not present in stream or creek areas within the study area. However, there are several records of this species within the study area vicinity, and suitable upland habitat occurs within the study area. CTS has been recorded southwest of the study area, near the UPRR tracks, north of Hillsdale Avenue, as well as between Aborn Road and U.S. 101. These occurrences are dated from 1993–2000 (California Natural Diversity Database 2010). Therefore, potential occurrence of CTS within the study area is considered to be low.

Western Pond Turtle

Western pond turtle is a state species of special concern. In September 2001, two adults were observed in the study area vicinity in Coyote Creek (California Natural Diversity Database 2010). Therefore, potential occurrence of Western Pond Turtles within the study area is considered to be low.

Burrowing Owl

Burrowing owl is a state species of special concern. Within the study area, burrowing owls may be found in open lots with short vegetation such as those found in or near Lake Cunningham, and Reid-Hillview Airport, There are several records of this species occurring within the study area vicinity, south of Cunningham Avenue (California Natural Diversity Database 2010). Figures 3.3-1a and 3.3-1b identifies suitable burrowing owl habitat within the study area. The potential occurrence of nesting burrowing owls is low but the potential for burrowing owls to forage in the study area is considered to be moderate.

Nesting Raptors

Raptors such as red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk *(Accipiter cooperii)*, white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), and great horned owl (*Bubo virginianus*) nest in riparian and woodland areas. Ground-nesting raptors such as northern harrier (*Circus cyaneus*) may nest in grassland habitat in the study area vicinity. The breeding season for these species generally lasts from February 1 to August 15. No active raptor nests were identified within the study area or its vicinity during the field surveys, but suitable nesting habitat is present. The potential for raptors to nest within the study area is considered low.

Swallows

Cliff swallow (*Petrochelidon pyrrhonota*), tree swallow (*Tachycineta bicolor*) and barn swallow (*Hirundo rustica*) are examples of swallows that may nest adjacent to the study area. No nesting swallows were observed during the 2001 and 2002 surveys, but it is possible for swallows to colonize previously unused bridges and trees that offer suitable habitat adjacent to the study area. The potential for swallows to nest within the study area is considered moderate.

Bat Species

The highly disturbed and urbanized nature of the Capitol Expressway Corridor offers marginal roosting habitat for special-status bat species. No bat roosting habitat occurs within the study area. However, bat species such as Townsend's big-eared bat (*Corynorhinus townsendii*) may roost and forage adjacent to the study area, at bridges and in riparian habitat. The potential for bat species to roost within the study area is considered low.

Environmental Consequences

APPROACH AND METHODS

The assessment of adverse effects related to biological resources was evaluated by reviewing the proposed alternatives and engineering plans, in comparison to the status of existing biological resources as identified during previous field surveys. Identified adverse effects were reported as either temporary (short-term) or permanent (long-term). Temporary effects could result from construction noise, runoff, staging, and other construction activities. Permanent effects could result from continuing operation of new facilities and infrastructure, including roads, transit stations, parking and storage facilities, and pathways.

EFFECTS AND MITIGATION MEASURES

No-Build Alternative

The No-Build Alternative would not include construction of structures or facilities and no biological resources effects are anticipated.

Light Rail Alternative

This section discusses construction and operation-related effects of the Light Rail Alternative. The effects are mostly related to initial construction and refer to the temporary effects of activities such as site preparation, construction staging, and installation of trackways and structures, which by nature generally result in temporary effects to biological resources. These effects are also discussed in Section 3.18 *Construction*.

Impact: Permanent Loss of Potential Burrowing Owl Habitat

Implementation of the Light Rail Alternative would result in the disturbance and potential permanent loss of approximately 5.21 acres of ruderal habitat within the study area. Development in this portion of the study area includes construction of a traction power system substation and multi-use path, and relocation of an existing electrical tower between Ocala Avenue and Cunningham Avenue that would disturb and potentially permanently remove up to 3.77 acres of ruderal habitat adjacent to the Reid-Hillview Airport. Construction of an elevated section of the alignment, which would veer west across Capitol Expressway approximately 700 feet north of Tully Road, then skirt along the western side of the roadway on the approach to the Eastridge Transit Station, would permanently remove 1.18 acres of ruderal habitat between Cunningham Avenue and Tully Road, and 0.26 acres of ruderal habitat between Tully Road and Eastridge Loop. The use of the section south of Capitol Expressway, between Tully Road and Cunningham Avenue, as a staging area, would temporarily remove 2.76 acres of ruderal habitat.

Based on the biological surveys conducted in November 2002, 7.97 acres of ruderal habitat within the study area was identified as potential habitat for burrowing owl. Although the habitat is not currently occupied by burrowing owls, the species is known to occur near the corridor and could colonize currently unoccupied habitat before construction begins.

Although ruderal habitat is not a sensitive natural community and is common both locally and regionally, the permanent loss of 5.21 acres of ruderal habitat that could potentially be occupied by the special-status burrowing owl, temporary loss of 2.76 acres of potential habitat (in the staging area), and temporary disturbance due to construction-related noise would be considered a substantial adverse effect. However, implementation of the following mitigation measures would minimize this effect.

Mitigation: BIO-1 – Conduct Preconstruction Surveys for Nesting and Wintering Burrowing Owls and Implement Measures to Avoid or Minimize Adverse Effects if Owls Are Present

Preconstruction surveys for burrowing owls shall be conducted by a qualified ornithologist before any development within the habitat identified in Figures 3.3-1a and 3.3-1b. These surveys will be consistent with those described in Condition 16 in Chapter 6 of the Santa Clara Valley Habitat Plan (SCV Habitat Plan or Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan [HCP/NCCP]) which is discussed on page 3.3-8 of this section.

All survey requirements outlined in Condition 16 will be applied as dictated to avoid impacts to individual burrowing owls.

VTA will ensure that the permanent loss of burrowing owl habitat in the study area is replaced with habitat of equal or greater value. Location of the compensation habitat will be identified in conjunction with CDFG and the SCV Habitat Plan Implementing Entity. It is anticipated that coverage for these impacts will be sought under the SCV Habitat Plan. Therefore, the burrowing owl conservation fee will be paid as described in the SCV Habitat Plan to the Implementing Entity or land will be set aside consistent with the burrowing owl conservation strategy outlined in the draft SCV Habitat Plan.

Impact: Temporary Disturbance to Nesting Habitat for Migratory Birds (Including Raptors)

Construction of the Light Rail Alternative could disturb nesting migratory birds, including raptors, in nearby trees. Migratory bird nests and eggs are protected by federal and state laws, including the Migratory Bird Treaty Act and California Fish and Game Code Section 3503.5. Temporary disturbance of nesting migratory birds would be considered a substantial adverse effect if that disturbance disrupts the nesting cycle or indirectly causes a nest to fail (e.g., due to noise). However, implementation of the following mitigation measures would avoid this effect.

Mitigation: BIO-2 – Conduct Preconstruction Surveys for Nesting Migratory Birds, including Raptors

If construction activities are scheduled to occur during the bird breeding season (February 1–August 31) a preconstruction survey for nesting migratory birds shall be conducted prior to commencement of any vegetation removal activities. If an active nest is identified within the study area a qualified ornithologist will work with the construction personnel to identify a buffer around the nest so that construction activities can continue without changing the behavior of the birds. The buffer will be communicated to CDFG and will remain in place until the young are able to fly and move out of the area or the nest is unsuccessful as determined by the ornithologist.

Impact: Conflict with the Provisions of an Adopted Habitat Conservation Plan or Natural Community Conservation Plan

One HCP/NCCP is currently under development in the vicinity of the project area. This is the SCV Habitat Plan. The Final Habitat Conservation Plan is being revised based on comments received on the

Draft. Implementation of the Plan is expected in mid-2013. If development and/or species permits are going to be granted prior to mid-2013, then the project is ahead of the SCV Habitat Plan and would not be covered. If the project does not need permits until after the Plan is in place, then it would likely be a covered activity. Based on the current schedule the Light Rail Alternative is expected to be included within the HCP's list of covered activities. This inclusion would ensure that any development of the Light Rail Alternative would not conflict with the intentions of the Plan. If the project moved ahead of the SCV Habitat Plan, approval of the mitigation shown above would not be in conflict with the Plan. Therefore, there would be no adverse effects.

No adverse effects. No mitigation required.

Impact: Loss of Urban Trees

Construction of the Light Rail Alternative may result in the removal of trees in landscaped areas along the proposed alignment. Trees that may be removed include California pepper, olive, tree-of-heaven, and blue gum eucalyptus (*Eucalyptus globulus*). These large trees may serve as nest sites or perches for raptors and bats, and loss of these trees would be considered a substantial adverse effect. However, implementation of the following mitigation measures would minimize this effect.

Mitigation: BIO-3 – Conduct a Tree Survey to Assess Tree Resources Impacted

VTA will conduct a tree survey along the Capitol Expressway Corridor to identify trees subject to removal or loss during construction. If the survey determines that no trees would be lost, no further mitigation is required. However, if the survey identifies trees that would be removed or damaged, VTA will also implement Mitigation Measure BIO-4.

Mitigation: BIO-4 – Replace Trees

All urban trees that are to be removed or lost shall be replaced. Trees with a diameter less than 12 inches shall be replaced at a 2:1 ratio. All trees with a diameter of 12 inches or more shall be replaced at a 3:1 ratio. If urban trees (nonnatives and ornamentals) are replaced with native trees, a reduced mitigation ratio of 1:1 for all trees smaller than 12 inches in diameter, and 2:1 for all trees with a diameter 12 inches or more, shall be implemented. These trees shall be irrigated and maintained for a period of not fewer than 3 years.

Proposed Option

The above discussion is inclusive of the Light Rail Alternative options.

CUMULATIVE EFFECTS

No-Build Alternative

The No-Build Alternative would not contribute to cumulative impacts on biological resources.

Light Rail Alternative

Biological resources in the study area has been substantially reduced and fragmented by development. Remaining areas of open space include ruderal and aquatic habitats. Implementation of existing local plans and policies and measures in the future SCV Habitat Plan related to burrowing owl mitigation would identify and conserve remaining biological resources in the area to the extent possible. Furthermore, potential biological resources impacts of the Light Rail Alternative in combination with other foreseeable projects would be offset by project-specific mitigations. Therefore, no adverse cumulative impacts to biological resources are anticipated.