

5.2 BIOLOGICAL RESOURCES AND WETLANDS

5.2.1 INTRODUCTION

This section discusses potential adverse effects to vegetation communities and special status species. Effects would be considered adverse if the alternatives would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species regionally, by the state, or nationally. This section also considers the effect of the alternatives on any riparian habitat, other sensitive natural community, state waters, and federally protected wetlands as defined by Section 404 of the Federal Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal waters). This section also discusses the potential for the alternatives to interfere substantially with the movement of any native resident or migratory fish, wildlife species, an established native resident, or migratory wildlife corridor(s), or impede the use of native wildlife nursery sites.

5.2.2 IMPACT DISCUSSION

This section describes the effects to biological resources associated with the BEP and SVRTP alternatives. Projects planned under the No Build Alternative would undergo separate environmental review to define effects to vegetation communities, wetlands and waters of the U.S., and special status species, and to determine appropriate mitigation measures.

Vegetation Communities

No Build Alternative

The No Build Alternative consists of the existing transit and roadway networks and planned and programmed improvements in the SVRTC. The No Build Alternative projects would likely result in biological effects typically associated with transit facilities and roadway projects. Mitigation for potential adverse effects could include avoidance or replacement of a vegetation community in accordance with a mitigation and monitoring plan approved by the regulating agencies. Projects planned under the No Build Alternative would undergo separate environmental review to determine any potential adverse effects to vegetation communities.

BEP Alternative

Non-native grassland would be affected by long term construction staging in the area south of Calaveras Boulevard (3.5 acres). This is considered an adverse effect if the staging area was found to support burrowing owl or Congdon's tarplant during planned pre-construction surveys, in which case, mitigation measures are proposed. These measures are described in Section 6.3.3 for the construction phase.

There is also potential for effects on loggerhead shrike foraging habitat from the permanent loss of non-native grassland within the SVRTC, but this effect is not considered to be substantially adverse, given that there are many remaining foraging opportunities for this species within the SVRTC and surrounding areas.

Potential adverse effects to up to 1.4 acres of Central Coast cottonwood-sycamore riparian forest along Upper Penitencia Creek could occur due to the design of the Berryessa Station. The station area includes either a 150-foot setback from the near banks of these creeks or a 100-foot setback from the riparian tree dripline (outer edges of the tree canopy), whichever is greater. This conforms to the San Jose Riparian Corridor Policy Study guidelines (1999), which require “a minimum of 100 feet from the edge of the riparian corridor (or top of bank, whichever is greater).” The two exceptions to this setback occur at the following locations: 1) where a new street on the east side of the railroad ROW, Berryessa Station Way, crosses over Upper Penitencia Creek to/from Berryessa Road and 2) where Berryessa Station Way intersects with Mabury Road to approximately 200 feet north. Encroachment into the riparian setback near Mabury Road has been approved by the City of San Jose. Documentation of this approval is provided in Appendix H, Agency Letters. To the maximum extent practicable, VTA will avoid adverse effects to riparian habitat as described in Mitigation Measure BIO-1. Where adverse effects are unavoidable, VTA will implement Mitigation Measure BIO-2.

Mitigation Measure BIO-1 – Avoidance of Riparian Habitat. VTA will design all project facilities to avoid temporary and permanent adverse effects to riparian habitat to the maximum extent practicable. Central Coast cottonwood-sycamore riparian forest areas identified along Upper Penitencia will be identified and marked with protective orange fencing to avoid disturbance or accidental intrusion by workers or equipment.

Mitigation Measure BIO-2 – Compensation for Adverse Effects to Riparian Habitat. If avoidance is not feasible, adverse effects to the riparian habitat will be mitigated at ratios based on the quality of habitat to be affected. A 2:1 ratio or another ratio would be determined in consultation with CDFG. A detailed riparian restoration plan will be prepared. This plan will provide for the replacement of lost acreage as well as values and functions of riparian habitat, including shaded riverine aquatic cover vegetation, and locations of restoration opportunities, with a technical approach to create high-quality riparian and shaded riverine aquatic cover habitat.

Mitigation for adverse effects to riparian habitat will be in-kind, except that non-native species will be replaced with commercially available native species common to the planting area, and on-site to the maximum extent practicable. If mitigation cannot be accommodated entirely on-site, VTA will coordinate with CDFG to identify other potential riparian mitigation sites within the affected watershed. A qualified biologist, in coordination with resource agency personnel, will prepare a mitigation and monitoring plan for adverse effects to riparian habitat due to the project.

It should be noted that VTA has been in discussion with the U.S. Army Corps of Engineers (ACOE), National Marine Fisheries Service (NOAA Fisheries), California Department of Fish and Game (CDFG), Santa Clara Valley Water District (SCVWD), and Regional Water Quality Control Board (RWQCB) to potentially offset any adverse effects to the riparian corridor due to the Berryessa Station by designing and implementing onsite mitigation that will improve existing conditions at Upper Penitencia Creek. This effort is preliminary and coordination will continue in subsequent engineering phases as the design of the station and potential adverse effects to the riparian corridor are better defined.

A *Biological Assessment for the Silicon Valley Rapid Transit Corridor Project* (ICF/Jones & Stokes 2009) was prepared for the BEP and SVRTP alternatives in accordance with Section 7 of the federal Endangered Species Act for the California red-legged frog and California tiger salamander. USFWS issued a Letter of Concurrence on the assessment on January 29, 2010. The letter states that the project is not likely to adversely affect the California red-legged frog or California tiger salamander, as measures are included to avoid take of these species and compensate for any permanent loss of riparian habitat. Specifically, the letter includes a 3:1 ratio (acres of habitat restored: acres of habitat lost) for loss of riparian habitat at Upper Penitencia Creek. Restoration includes removing paved surfaces adjacent to the riparian corridor and restoring riparian vegetation within the designated 100-foot riparian buffer zone. While USFWS evaluated the potential for effects to California tiger salamander, as discussed in Section 4.2, the SVRTC is not located within an area designated as critical habitat for the California tiger salamander and the species is not expected to occur in the project area. The *Biological Assessment* is incorporated by reference and available on request; the Letter of Concurrence is included in Appendix H.

A *Biological Assessment and Essential Fish Habitat Assessment for the Silicon Valley Rapid Transit Corridor Project* (ICF/Jones & Stokes 2009) was prepared for the BEP and SVRTP alternatives for the Central California Coast steelhead and Chinook salmon, respectively. The Biological Assessment was prepared in accordance with Section 7 of the federal Endangered Species Act and Essential Fish Habitat Assessment was prepared in accordance with the Magnuson-Stevens Fishery Conservation and Management Act. NOAA Fisheries issued a Letter of Concurrence on these assessments on February 12, 2010. The letter states that the project is not likely to adversely affect the Central California Coast steelhead and designated critical habitat at Upper Penitencia Creek. The letter acknowledges that the BART aerial guideway and Berryessa Station Way would be constructed over Upper Penitencia Creek and would clear the existing active stream channel. The letter also acknowledges that the location of these structures would provide for a stream corridor of sufficient width to allow for channel restoration, habitat enhancements, widened riparian zone, and conveyance of the 100-year flood flow. The BEP and SVRTP alternatives do not include stream channel restoration components, but the BART aerial guideway and Berryessa Station Way would be designed in a manner that allows for the potential future construction of the Upper Penitencia Creek Flood Protection Project and stream habitat enhancements.

The *Biological Assessment and Essential Fish Habitat Assessment* is incorporated by reference and available on request; the Letter of Concurrence is included in Appendix H.

SVRTP Alternative

All adverse effects are the same as those discussed under the BEP Alternative. No additional adverse effects to sensitive vegetation communities are anticipated by extending the project to Santa Clara, as much of the SVRTP Alternative along this segment is underground and/or avoids vegetation communities.

Wetlands and Waters of the U.S.

No Build Alternative

The No Build Alternative consists of the existing transit and roadway networks and planned and programmed improvements in the SVRTC. The No Build Alternative projects would likely result in effects to wetlands typically associated with transit facilities and roadway projects. Where state and federal criteria are exceeded, mitigation could include avoidance or replacement of the wetlands in accordance with a mitigation and monitoring plan approved by the regulating agencies. Projects planned under the No Build Alternative would undergo separate environmental review to determine effects to wetlands and waters of the U.S.

BEP Alternative

Adverse effects associated with several creeks/drainage structures that cross the BEP and SVRTP alternative alignments are discussed in the *Freight Railroad Relocation and Lower Berryessa Creek Project – Initial Study with Mitigated Negative Declaration* (September 2007). This project includes drainage improvements on Toroges Creek/Line C,¹ unnamed creek/Line B-1, unnamed creek/Line B, Scott Creek/Line A, Berryessa Creek, and Wrigley Creek to accommodate design flow and water surface elevations from a 100-year flood event. Similarly, the drainage improvements at Agua Fria/Line D are being constructed prior to construction of either the BEP or SVRTP alternative. The BEP and SVRTP alternatives will not adversely affect these creeks/drainages, as the drainage improvements will be in place prior to the construction of the BART extension. In fact, construction of the Freight Railroad Relocation and Lower Berryessa Creek Project including the drainage improvements is currently underway (2009). Similarly, the drainage improvements at Agua Fria/Line D will be being constructed prior to the construction of the BART extension. (See Section 5.15, Water Resources and the initial study and biological reports listed in the Chapter 14, References, for further information on these creeks/drainage structures). The following discussion includes creeks where no planned improvements are scheduled by other agencies, but are included in the BEP and SVRTP alternatives.

¹ The Alameda County Flood Control and Water Conservation District) refers to creeks in Alameda County as “Drainage Lines,” e.g., Agua Caliente Creek as Drainage Line F. Therefore, the creeks in Alameda County within the SVRTC study area are also referred to as “Lines.”

Estimation of adverse effects to wetlands and waters of the U.S. from the BEP Alternative is based upon wetlands delineation and summarized in Table 5.2-1. Approximately 0.56 acres of seasonal and freshwater emergent wetlands would be affected by the design of the project due to the improvement of drainage in the ROW that would lead to the elimination of seasonal wetlands within the corridor. Permanent adverse effects to wetlands and waters of the U.S. would be avoided or minimized through implementation of Mitigation Measure BIO-3 and BIO-4.

Table 5.2-1: Adverse Effects to Jurisdictional Wetlands and Waters of the U.S.

Jurisdictional Area/Location (Wetlands)	Permanent Effects
Permanent fill of seasonal wetlands north of Agua Caliente Creek	0.04 acre ^a
Permanent fill of seasonal wetlands south of Dixon Landing Road	0.37 acre
Permanent fill of seasonal wetlands north of Montague Expressway	0.15 acre
Total Wetlands Acreage Adversely Affected	0.56 acres

^a The wetland north of Agua Caliente Creek was delineated in A Report on Wetlands and Other Aquatic Habitats Occurring along the San Francisco Bay Area Rapid Transit District Proposed Warm Springs Extension Prepared for San Francisco Bay Area Rapid Transit District (Jones & Stokes, 2002)

Source: Parsons Corporation and Earth Tech, Inc., 2003 and Jones & Stokes, 2006.

Mitigation Measure BIO-3 – Avoidance of Wetland Habitat. VTA will design all project facilities to avoid temporary and permanent adverse effects to wetlands and waters of the United States to the maximum extent practicable.

Mitigation Measure BIO-4 – Compensation for Adverse Effects to Wetland Habitat. If avoidance is not feasible, VTA will mitigate the permanent loss of wetlands at a minimum 2:1 ratio (replacement area: loss area) and the temporary loss of wetlands at a minimum 1:1 ratio, or at higher ratios determined in consultation with resource agency personnel. Permanent and temporary adverse effects to waters of the U.S. will be mitigated at minimum 1:1 ratio, or at a higher ratio determined in consultation with resource agency personnel. Mitigation ratios will be agreed upon with appropriate resource agencies prior to certification of the Final EIS. Mitigation will be on-site and in-kind to the maximum extent practicable. If mitigation cannot be accommodated entirely on-site, VTA will investigate other mitigation opportunities in coordination with resource agency personnel within the affected watershed, if possible. In anticipation of this, VTA is currently in discussions with the RWQCB and the City of Milpitas to develop a mitigation site on Wrigley Creek, which includes redesigning the linear channel to include meanders and more natural features.

A qualified biologist, in coordination with resource agency personnel, will prepare a mitigation and monitoring plan for adverse effects to wetlands and waters of the U.S. due to the project. This plan will comply with the March 2008 Compensatory Mitigation Rule published by EPA and the ACOE and will include objectives; site selection criteria; site protection instruments (e.g., conservation easements); baseline information (for impact and compensation sites); credit

determination methodology; a mitigation work plan; a maintenance plan; ecological performance standards; monitoring requirements; a long-term management plan; an adaptive management plan; and financial assurances.

The Compensatory Mitigation Rule describes the most preferred options for mitigation are 1) use of credits from a mitigation bank, 2) use of credits from an in-lieu fee program, 3) permittee-responsible compensatory mitigation. At this time and in the foreseeable future, there is no mitigation bank or in-lieu fee program approved in the project area.

VTA has been in discussion with the ACOE, NOAA Fisheries, CDFG, SCVWD, and RWQCB to potentially offset any adverse effects to wetlands and water of the U.S. due to the Berryessa Station by designing and implementing onsite mitigation that will improve existing conditions at Upper Penitencia Creek. This effort is preliminary and coordination will continue in subsequent engineering phases as the design of the station and potential adverse effects wetlands and waters of the U.S. are better defined.

SVRTP Alternative

All adverse effects are the same as those discussed under the BEP Alternative. No additional adverse effects to sensitive wetlands and waters of the U.S. are anticipated by extending the project to Santa Clara, as much of the SVRTP Alternative along this segment is underground and/or avoids wetlands and waters of the U.S.

Special Status Species

No Build Alternative

The No Build Alternative consists of the existing transit and roadway networks and planned and programmed improvements in the SVRTC. The No Build Alternative projects would likely result in adverse effects to special status species typically associated with transit facilities and roadway projects. Where state and federal criteria are exceeded, mitigation could include avoidance or replacement of the protected species in accordance with a mitigation and monitoring plan approved by the regulating agencies. Projects planned under the No Build Alternative would undergo separate environmental review to determine adverse effects to special status species.

BEP Alternative

The BEP Alternative would require four park-and-ride parking lots for the additional bus service. The four lots include: one within existing facilities located at the approved Warm Springs BART Station (303 spaces), one at the Berryessa BART Station (753 spaces in the parking garage), and one existing Evelyn LRT Station in Mountain View (49 spaces). The fourth parking facility would be constructed in downtown Sunnyvale to accommodate 91 spaces. Figures 2-10 through 2-13 show the locations of the park-and-ride lots. As all of these facilities are currently developed and do not support special status species, no adverse effects are anticipated from the operation of the BEP Alternative and no mitigation is required.

Construction phase mitigation measures for biological resources are discussed in Section 6.3.3 of Chapter 6, Construction. It is anticipated that best management practices will be included as conditions of the ACOE Section 404 permit and CDFG Streambed Alteration Agreement. The 401 Water Quality Certification may also include waste discharge requirements.

SVRTP Alternative

The SVRTP Alternative would require three park-and-ride parking lots for the additional bus service: within existing facilities located at the approved Warm Springs BART Station (291 spaces) and the existing Evelyn LRT Station in Mountain View (47 spaces). The third site at the southeast corner of Carroll Street and Evelyn Avenue in downtown Sunnyvale is an existing parking lot that would be double-decked to add 61 spaces. The Berryessa Station would not require any additional park-and-ride parking to support the bus service for this alternative.

All adverse effects are the same as those discussed under the BEP Alternative. No additional adverse effects to special status species are anticipated by extending the project to Santa Clara.

5.2.3 CUMULATIVE IMPACTS

The trend of urbanization that has occurred in the SVRTC over the last 40 years has affected several biological resources and supporting habitat. However, there are several local policies in-place intended to balance resource conservation and urban development. These policies, as identified in city and county general plans, generally aim to identify and conserve as much of the remaining biological resource base as possible by preventing avoidable adverse effects. Additionally, VTA, the County of Santa Clara, the SCVWD, and the cities of San Jose, Gilroy, and Morgan Hill are currently developing a Habitat Conservation Plan and Natural Communities Conservation Plan (HCP/NCCP) for the Santa Clara Valley. The purpose of the HCP/NCCP is to compensate for potential adverse effects to biological resources resulting from future anticipated growth in the region by conserving habitat and protecting special-status species during a fifty year permit term, as authorized by USFWS, NOAA Fisheries, and CDFG.

In addition to municipal policies and plans, there are several federal and state regulations intended to ensure that current project-related adverse effects to biological resources are minimized. These regulations include ACOE's no net loss policy for wetlands, the program administered by the CDFG in coordination with Alameda and Santa Clara counties to mitigate loss of burrowing owl habitat, and programs to preserve and enhance existing Congdon's tarplant and salmonid fisheries, as administered by CDFG, USFWS, and NOAA Fisheries. While these measures won't entirely isolate these resources from future adverse effects, they will assist in avoiding and minimizing effects over the long term, thereby reducing the potential for cumulative adverse effects.

The No Build, BEP, and SVRTP alternatives would all result in some limited adverse effects on seasonal wetlands, sensitive natural communities, waters of the U.S., and special status species. These alternatives in combination with other future transportation projects in the area would also result in additional adverse effects to biological resources in Alameda and Santa Clara counties. However, the cumulative adverse effects of transportation projects on biological resources would be offset by project-specific mitigation required by federal and state regulations (see above). In addition, most transportation projects will occur in areas that are currently developed or planned for further development as envisioned in the adopted general plans of each local jurisdiction. Therefore, no potentially substantial adverse cumulative effects are anticipated and no mitigation is required.