Section 3.3
Biological Resources

This section describes the biological resources in the project area and the potential impacts of the San Rafael Transit Center Replacement Project (proposed project) on these resources. This section discusses the federal, state, and local regulatory framework for biological resources; the existing conditions in the project area; and the potential for the proposed project and other build alternatives to affect biological resources. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project.

3.3.1 Existing Conditions

3.3.1.1 Regulatory Setting

Federal

Clean Water Act

The Clean Water Act (CWA) serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The CWA operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit; permit review is the CWA's primary regulatory tool. On April 21, 2020, the Navigable Waters Protection Rule was published in the Federal Register, providing a new and more restrictive definition of wetlands and non-wetland waters that are regulated under the CWA. This new rule took effect on June 22, 2020. Aquatic resources (i.e., wetlands, ponds, and streams) are present in the project area and may be regulated under CWA Section 404. Aquatic resources that are no longer regulated as a result of implementing the Navigable Waters Protection Rule will be regulated by the State Water Resources Control Board (SWRCB) based on the recently adopted state wetland definitions and procedures (see Porter-Cologne Water Quality Control Act). The following sections provide additional details on specific sections of the CWA.

Permits for Fill Placement in Waters and Wetlands (Section 404)

Applicants must obtain a Section 404 permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the United States, including adjacent wetlands, before proceeding with a proposed activity. Nationwide permits are preauthorized permits issued to cover particular fill activities. Each nationwide permit specifies conditions that must be met for the nationwide permit to apply to a project. Compliance with CWA Section 404 requires compliance with the National Environmental Policy Act, federal Endangered Species Act (ESA), and National Historic Preservation Act. In addition, USACE cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

Permits for Stormwater Discharge (Section 402)

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, which is administered by

the U.S. Environmental Protection Agency. In the project area, the San Francisco Bay Regional Water Quality Control Board (RWQCB) is authorized by the U.S. Environmental Protection Agency to oversee the NPDES program. NPDES permits are required for projects that disturb more than 1 acre of land. The NPDES permitting process requires the applicant to file a public notice of intent to discharge stormwater and to prepare and implement a Stormwater Pollution Prevention Plan, which includes the best management practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources.

Water Quality Certification (Section 401)

All projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

Executive Order 11990: Protection of Wetlands

Executive Order 11990, signed May 24, 1977, requires federal agencies to prepare wetland assessments for proposed actions located in or affecting wetlands. Agencies must avoid undertaking new construction in wetlands unless no practicable alternative is available, and the proposed action includes all practicable measures to minimize harm to wetlands.

Executive Order 13112: Prevention and Control of Invasive Species

Executive Order 13112, signed February 3, 1999, directs all federal agencies to prevent and control the introduction of invasive species in a cost-effective and environmentally sound manner. This executive order established the National Invasive Species Council, which is composed of federal agencies and departments, and a supporting Invasive Species Advisory Committee composed of state, local, and private entities. In 2008, the National Invasive Species Council released an updated national invasive species management plan that recommends objectives and measures to implement the executive order and prevent the introduction and spread of invasive species (National Invasive Species Council 2008). The executive order requires consideration of invasive species in National Environmental Policy Act analyses, including their identification and distribution, their potential effects, and measures to prevent or eradicate them.

State

California Environmental Quality Act

The California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) is the regulatory framework by which California public agencies identify and mitigate significant environmental effects. A project normally has a significant environmental effect on biological resources if it substantially affects a rare or endangered species or the habitat of that species; substantially interferes with the movement of resident or migratory fish or wildlife; or substantially diminishes habitat for fish, wildlife, or plants. The State CEQA Guidelines define rare, threatened, and endangered species as those listed under the ESA and California Endangered Species Act (CESA) and any other species that meet the criteria of the resource agencies or local agencies (e.g., California Department of Fish and Wildlife [CDFW]-designated species of special concern). The guidelines state that the lead agency preparing an environmental impact report must consult with

and receive written findings from CDFW concerning project effects on species listed as endangered or threatened. The effects of a proposed project on these resources are important in determining whether the project has significant environmental effects under CEQA.

Porter-Cologne Water Quality Control Act

The California Water Code addresses the full range of water issues in the state and includes Division 7, known as the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (California Water Code Sections 13000–16104). Section 13260 requires "any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the State to file a report of discharge (an application for waste discharge requirements)" with the appropriate RWQCB. Under this act, each of the nine RWQCBs must prepare and periodically update Water Quality Control Basin Plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution. Projects that affect waters of the State must meet the waste discharge requirements of the RWQCB. Pursuant to CWA Section 401, an applicant for a Section 404 permit to conduct any activity that may result in discharge into navigable waters must provide a certification from the RWQCB that such discharge will comply with state water quality standards. As part of the permitting process under Section 404, the project proponent would be required to apply for water quality certification from the San Francisco Bay RWQCB.

Section 13050 of the Porter-Cologne Act authorizes the SWRCB and the relevant RWQCB to regulate biological pollutants. The California Water Code generally regulates more substances contained in discharges and defines discharges to receiving waters more broadly than does the CWA. In 2019, the SWRCB adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, which revised and clarified the regulation of state wetlands and procedures for permitting impacts on wetlands. The procedures took effect on May 28, 2020 (SWRCB 2019, 2020).

California Fish and Game Code

Section 1600: Streambed Alteration Agreements

CDFW regulates activities that would interfere with the natural flow—or substantially alter the channel, bed, or bank—of a lake, river, or stream. These activities are regulated under California Fish and Game Code Sections 1600–1616 and require a streambed alteration agreement if they would substantially adversely affect an existing fish or wildlife resource. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. CDFW may require avoidance or minimization of vegetation removal, use of standard erosion-control measures, limitations on the use of heavy equipment, limitations on work periods to avoid impacts on fish and wildlife, and restoration of degraded sites or compensation for permanent habitat losses, among other conditions. Aquatic resources (i.e., Irwin Creek and San Rafael Creek) are present in the project area and vicinity, and a streambed alteration agreement may be required if the proposed project would affect wildlife habitat associated with these resources.

Local

City of San Rafael Tree Ordinance

The City of San Rafael (City) code, Chapter 11.12, Trees, requires ~~approval~~ a written permit prior to~~for~~ pruning, disturbing, or removing any tree along a public street, sidewalk, or walkway within the City. If the tree is removed, the stump and roots must also be removed. Trees that will be avoided require placement of guards to prevent injury.

~~City of~~ San Rafael General Plan 204~~2~~0

The following policies and programs for biological resources from ~~*The City of*~~ *San Rafael General Plan 204~~2~~0* (City of San Rafael 2021), Conservation and Climate Change Element, are applicable to the proposed project.

- **Policy C-1.1: Wetlands Preservation.** Require appropriate public and private wetlands preservation, restoration and/or rehabilitation through the regulatory process. Support and promote acquisition of fee title and/or easements from willing property owners.
    - **Program C-1.1A: Surveys for Regulated Waters.** Require that sites with suitable natural habitat be surveyed for the presence or absence of regulated waters prior to development approval. Such surveys should be conducted by a qualified wetland specialist and occur prior to development-related vegetation removal or other habitat modifications.
- **Policy C-1.6: Creek Protection.** Protect and conserve creeks as an important part of San Rafael's identity, natural environment, and green infrastructure. Except for specific access points approved per Policy C-1.7 (Public Access to Creeks), development-free setbacks shall be required along perennial and intermittent creeks (as shown on www.marinmaps.org) to help maintain their function and habitat value. Appropriate erosion control and habitat restoration measures are encouraged within the setbacks, and roadway crossings are permitted.
    - **Program C-1.6A: Creek and Drainageway Setbacks:** Maintain the following setback requirements in the Municipal Code:
        (a) A minimum 25-foot development-free setback shall be maintained from the top of creek banks for all new development (including but not limited to paving and structures), except for Miller Creek and its tributaries, where a minimum 50-foot setback shall be maintained. Setbacks up to 100 feet may be required in development projects larger than two acres where development review determines that a wider setback is needed to maintain habitat values, and in areas where high-quality riparian habitat exists. The City may waive the setback requirement for minor encroachments if it can be demonstrated that the proposed setback adequately protects the functions of the creek to the maximum extent feasible and the results are acceptable to appropriate regulatory agencies.

        (b) Drainageway Setbacks: Drainageway setbacks shall be established through individual development review, taking into account existing habitat function and values.
- **Policy C-1.9: Enhancement of Creeks and Drainageways.** Conserve or improve the habitat value and hydrologic function of creeks and drainageways so they may serve as wildlife corridors and green infrastructure to improve stormwater management, reduce flooding, and sequester carbon. Require creek enhancement and associated riparian habitat restoration/creation for projects adjacent to creeks to reduce erosion, maintain storm flows, improve water quality, and improve habitat value where feasible.
    - **Program C-1.9D: Restoration of San Rafael, Mahon, and Irwin Creeks.** Pursue opportunities for creek restoration and beautification along San Rafael, Mahon, and Irwin

Creeks, building on past efforts supporting biological and ecological restoration, education, and water quality improvements along these waterways.

- **Policy C-1.11: Wildlife Corridors.** Preserve and protect areas that function as wildlife corridors, particularly those areas that provide connections permitting wildlife movement between larger natural areas.
    - **Program C-1.11A: Surveys for Wildlife Movement Corridors.** Require that sites with suitable natural or anthropogenic habitat, including creeks in urban areas, be surveyed for the presence or absence of important wildlife corridors, prior to development approval. Such surveys should be conducted by a qualified biologist following CDFG-accepted species-level protocol and occur prior to development-related vegetation removal or other habitat modifications. As resources allow, surveys also should be conducted in previously developed areas to establish conservation priorities, and support wildlife and ecosystem management and education programs.
- **Policy C-1.12: Native or Sensitive Habitats.** Protect habitats that are sensitive, rare, declining, unique, or represent a valuable biological resource. Potential impacts to such habitats should be minimized through compliance with applicable laws and regulations, including biological resource surveys, reduction of noise and light impacts, restricted use of toxic pesticides, pollution and trash control, and similar measures.
    - **Program C-1.12A: Surveys for Sensitive Natural Communities and Special Status Species.** Require that sites with suitable natural or anthropogenic habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of sensitive natural communities and special status species prior to development approval. Such surveys should be conducted by a qualified biologist following CDFG-accepted species-level protocol and occur prior to development-related habitat removal or other habitat modifications.
- **Policy C-1.13: Special Status Species.** Conserve and protect special status plants and animals, including those listed by State or federal agencies as threatened and/or endangered, those considered to be candidate species for listing by state and federal agencies, and other species that have been assigned special status by the California Native Plant Society and the California Fish and Game Code. Avoidance of impacts, accompanied by habitat restoration, is the preferred approach to conservation, but mitigation measures may be considered when avoidance is not possible.
    - **Program C-1.13B: Mitigating Impacts on Special Status Species.** Avoid and protect special status species and require that consultation with resource agencies be performed in conformance with federal and State regulations. Require that potential unavoidable impacts to special status species are minimized through design, construction, and project operations. If such measures cannot adequately mitigate impacts, require measures such as on-site set asides, off-site acquisitions (conservation easements, deed restrictions, etc.), and specific restoration efforts that benefit the listed species being impacted.
    - **Program C-1.13E: Avoidance of Nesting Birds.** Nests of native birds in active use shall be avoided in compliance with State and federal regulations. For new development sites where nesting birds may be present, vegetation clearing and construction shall be initiated outside the bird nesting season (February 1 through August 31) or pre-construction surveys shall be conducted by a qualified biologist within a minimum of 500 feet from the project site where access is feasible and no more than seven days prior to any disturbance. If active nests are encountered, appropriate work avoidance buffer zones shall be established based on recommendations by the biologist and remain in place until any young birds have successfully left the nest and are no longer dependent on parental care.
- **Policy C-1.14: Control of Invasive Plants.** Remove and control undesirable non-native plant species from City-owned open space and road rights-of-way and encourage the removal and control of these species from non-City owned ecologically sensitive or fire-prone areas.

- **Program C-1.14A: Identification of Desirable and Undesirable Species.** Use California Invasive Plant Council (Cal-IPC) guidance for desirable and invasive plants in the development review, design review, and public lands management processes. This guidance should ensure that noxious plants are not planted in new development, on rights of way, and on public land; help inform revegetation and replanting programs; and support the management of existing vegetation.

- **Policy C-1.15: Landscaping with Appropriate Naturalized Plant Species.** Encourage landscaping with native and compatible non-native plant species that are appropriate for the dry summer climate of the Bay Area, with an emphasis on species determined to be drought resistant. Diversity of plant species is a priority for habitat resilience.
- **Policy C-1.16: Urban Forestry.** Protect, maintain, and expand San Rafael's tree canopy. Trees create shade, reduce energy costs, absorb runoff, support wildlife, create natural beauty, and absorb carbon, making them an essential and valued part of the city's landscape and strategy to address global climate change. Tree planting and preservation should be coordinated with programs to reduce fire hazards, reduce greenhouse gas emissions, expand solar opportunities, and ensure public safety, resulting in a community that is both green and fire safe.
- **Policy C-1.17: Tree Management.** The removal of healthy trees shall be discouraged, and their replacement may be required when trees are removed due to health, safety, or maintenance reasons. Site plans should indicate the location of existing trees and include measures to protect them wherever feasible.
  - **Program C-1.17A: Tree Preservation.** Revise Chapter 11.12 of the Municipal Code (Trees) or add a new Code section that defines protected and heritage trees and establishes permit requirements and procedures for tree protection, removal, and replacement. The regulations should strongly support the protection of California redwoods (*Sequoia sempervirens*) and other native trees.
  - **Program C-1.17B: Tree Management Plan.** Require a tree management plan prior to approval of development with the potential to remove or substantially impact trees. The Plan should be prepared by a licensed arborist using published standards and practices for protecting and monitoring tree health during and after construction.
  - ~~o~~ **Program C-1.17C: Mitigation for Tree Removal.** Continue to implement mitigation requirements for tree removal in new development. When necessary, this could include planting of trees in locations other than the project site, planting native trees in lieu of non-natives, or reducing the footprint of proposed development. Tree replacement should be based on a value that is equal to or greater than the carbon footprint and ecological benefits of the trees being removed. Ecological benefits include water conservation, absorption of runoff, reduction of air pollution, energy reduction from shade and cooling effects, soil retention, slope stabilization, and wildlife support.~~**CON-1. Protection of Environmental Resources.** Protect or enhance environmental resources, such as ridgelines, wetlands, diked baylands, creeks and drainageways, shorelines and habitat for threatened and endangered species.~~
  - ~~o~~ ~~**CON-6. Creek and Drainageway Setbacks.** Require development-free setbacks, except for specific access points as approved per policy CON-7 (Public Access to Creeks), from existing creeks and drainageways that will maintain the functions and resulting values of these habitats. Appropriate erosion control and roadway crossings may encroach into the development setback. In the absence of vegetation, promote new growth of natural habitat.~~
  - ~~o~~ ~~**CON-7. Public Access to Creeks.** Provide pedestrian access to points along creeks throughout the City where such access will not adversely affect habitat values.~~
  - ~~o~~ ~~**CON-8. Enhancement of Creeks and Drainageways.** Explore enhancement of, and support continuous upgrades to, drainageways to serve as wildlife habitat corridors for wildlife movement and to serve as flood control facilities to accommodate storm drainage. Require~~

creek enhancement and associated riparian habitat restoration/creation for projects adjacent to creeks to maintain storm flows, reduce erosion and maintenance and improve habitat values, where feasible.

- **CON-9. Native and/or Sensitive Habitats.** Protect habitats that are sensitive, rare, declining, unique or represent a valuable biological resource.
- **CON-10. Impacts to Sensitive Habitats.** Minimize impacts to sensitive natural habitats through careful planning. Require compliance with applicable laws and regulations.
- **CON-11. Wildlife Corridors.** Preserve and protect areas that function as wildlife corridors, particularly those areas that provide natural connections permitting wildlife movement between designated sensitive habitats.
- **CON-14. Special Status Species.** Preserve and protect special status plants and animals, including candidate species for listing under the state and federal endangered species acts, California species of special concern, California Native Plant Society List 1B plants, and other species protected under provisions of California Fish and Game Code.
- **CON-15. Invasive Non-Native Plant Species.** Remove and control selected undesirable invasive non-native plant species from City-owned open space and road right of ways, and encourage the removal and control of these invasive plant species from non-City owned ecologically-sensitive areas.
- **CON-16. Landscape with Native Plant Species.** Encourage landscaping with native and compatible non-native plant species, especially drought-resistant species.

Draft San Rafael General Plan 2040

The City of San Rafael is currently working on the Draft *San Rafael General Plan 2040*. The following policies for biological resources from the Draft *San Rafael General Plan 2040* (City of San Rafael 2020), Conservation and Climate Change Element, relate to the proposed project.

Policy C-1.6: Creek Protection. Protect and conserve creeks as an important part of San Rafael's identity, natural environment, and green infrastructure. Except for specific access points approved per Policy C-1.7 (Public Access to Creeks), development-free setbacks shall be required along perennial and intermittent creeks (as shown on Figure 6-2) to help maintain their function and habitat value. Appropriate erosion control and habitat restoration measures are encouraged within the setbacks, and roadway crossings are permitted.

Policy C-1.9: Enhancement of Creeks and Drainageways. Conserve or improve the habitat value and hydrologic function of creeks and drainageways so they may serve as wildlife corridors and green infrastructure to improve stormwater management, reduce flooding, and sequester carbon. Require creek enhancement and associated riparian habitat restoration/creation for projects adjacent to creeks to reduce erosion, maintain storm flows, improve water quality, and improve habitat value where feasible.

Policy C-1.11: Wildlife Corridors. Preserve and protect areas that function as wildlife corridors, particularly those areas that provide connections permitting wildlife movement between larger natural areas.

Policy C-1.13: Special Status Species. Conserve and protect special status plants and animals, including those listed by State or federal agencies as threatened and/or endangered, those considered to be candidate species for listing by state and federal agencies, and other species that have been assigned special status by the California Native Plant Society and the California Fish and Game Code.

Policy C-1.14: Control of Invasive Plants. Remove and control undesirable non-native plant species from City-owned open space and road rights-of-way and encourage the removal and control of these species from non-City owned ecologically sensitive or fire-prone areas.

Policy C-1.15: Landscaping with Appropriate Naturalized Plant Species. Encourage landscaping with native and compatible non-native plant species that are appropriate for the dry summer climate of the Bay Area, with an emphasis on species determined to be drought-resistant. Diversity of plant species is a priority for habitat resilience.

Policy C-1.16: Urban Forestry. Protect, maintain, and expand San Rafael's tree canopy. Trees create shade, reduce energy costs, absorb runoff, support wildlife, create natural beauty, and absorb carbon, making them an essential and valued part of the city's landscape and strategy to address global climate change. Tree planting and preservation should be coordinated with programs to reduce fire hazards and ensure public safety, resulting in a community that is both green and fire-safe.

Policy C-1.17: Tree Management. Encourage the preservation of healthy, mature trees when development and/or construction is proposed. Site plans should indicate the location of existing trees and include measures to protect them where feasible.

Marin Countywide Plan

The following policies for biological resources from the *Marin Countywide Plan* (Marin County Community Development Agency 2014) are applicable to the proposed project.

BIO-1.1. Protect Wetlands, Habitat for Special-Status Species, Sensitive Natural Communities, and Important Wildlife Nursery Areas and Movement Corridors. Protect sensitive biological resources, wetlands, migratory species of the Pacific flyway, and wildlife movement corridors through careful environmental review of proposed development applications, including consideration of cumulative impacts, participation in comprehensive habitat management programs with other local and resource agencies, and continued acquisition and management of open space lands that provide for permanent protection of important natural habitats.

BIO-1.5. Promote Use of Native Plant Species. Encourage use of a variety of native or compatible nonnative, non-invasive plant species indigenous to the site vicinity as part of project landscaping to improve wildlife habitat values.

BIO-1.6. Control Spread of Invasive Exotic Plants. Prohibit use of invasive species in required landscaping as part of the discretionary review of proposed development. Work with landowners, landscapers, the Marin County Open Space District, nurseries, and the multi-agency Weed Management Area to remove and prevent the spread of highly invasive and noxious weeds. Invasive plants are those plants listed in the State's Noxious Weed List, the California Invasive Plant Council's list of "Exotic Pest Plants of Greatest Ecological Concern in California," and other priority species identified by the agricultural commissioner and California Department of Agriculture. Species of particular concern include the following: barbed goatgrass (*Aegilops triuncialis*), giant reed (*Arundo donax*), Italian thistle (*Carduus pycnocephalus*), distaff thistle (*Carthamus lanatus*), purple starthistle (*Centaurea calcitrapa*), yellow starthistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Scotch broom (*Cytisus scoparius*), Cape ivy (*Delairea odorata*), oblong spurge (*Euphorbia oblongata*), fennel (*Foeniculum vulgare*), French broom (*Genista monspessulana*), salt-water cord grass (*Spartina alternifolia*), Spanish broom (*Spartium junceum*), medusahead (*Taeniatherum caput-medusae*), gorse (*Ulex europaeus*), and periwinkle (*Vinca major*), among others.

BIO-2.1. Include Resource Preservation in Environmental Review. Require environmental review pursuant to CEQA of development applications to assess the impact of proposed development on native species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and important wildlife nursery areas and movement corridors. Require adequate mitigation measures for ensuring the protection of any sensitive resources and achieving "no net loss" of sensitive habitat acreage, values, and function.

BIO-2.5. Restrict Disturbance in Sensitive Habitat During Nesting Season. Limit construction and other sources of potential disturbance in sensitive riparian corridors, wetlands, and baylands to protect bird nesting activities. Disturbance should generally be set back from sensitive habitat during the nesting season from March 1 through August 1 to protect bird nesting, rearing, and fledging

activities. Preconstruction surveys should be conducted by a qualified professional where development is proposed in sensitive habitat areas during the nesting season, and appropriate restrictions should be defined to protect nests in active use and ensure that any young have fledged before construction proceeds.

BIO-2.6. Identify Opportunities for Safe Wildlife Movement. Ensure that existing stream channels and riparian corridors continue to provide for wildlife movement at roadway crossings, preferably through the use of bridges, or through over-sized culverts, while maintaining or restoring a natural channel bottom. Consider the need for wildlife movement in designing and expanding major roadways and other barriers in the county. Of particular concern is the possible widening of Highway 101 north of Novato to the county line, where maintenance of movement opportunities for terrestrial wildlife between the undeveloped habitat on Mount Burdell and the marshlands along the Petaluma River is critical.

BIO-2.a. Require Site Assessments. Require site assessment by a qualified professional for development applications that may adversely affect sensitive biological or wetland resources, including jurisdictional wetlands, occurrences of special-status species, occurrences of sensitive natural communities, and important wildlife nursery areas and movement corridors. The assessment should determine the presence or absence of any sensitive resources that could be affected by development, evaluate the potential impacts, and identify measures for protecting the resource and surrounding habitat. Require the assessment to be conducted by a qualified professional paid for by the applicant. Unless waived, the qualified professional should be hired directly by Marin County.

BIO-4.1. Restrict Land Use in Stream Conservation Areas. A Stream Conservation Area (SCA) is established to protect the active channel, water quality and flood control functions, and associated fish and wildlife habitat values along streams. Development shall be set back to protect the stream and provide an upland buffer, which is important to protect significant resources that may be present and provides a transitional protection zone. Best management practices shall be adhered to in all designated SCAs. Best management practices are also strongly encouraged in ephemeral streams not defined as SCAs.

Exceptions to full compliance with all SCA criteria and standards may be allowed only if the following is true:

1. A parcel falls entirely within the SCA; or
2. Development on the parcel entirely outside the SCA either is infeasible or would have greater impacts on water quality, wildlife habitat, other sensitive biological resources, or other environmental constraints than development within the SCA.

SCAs consist of the watercourse itself between the tops of the banks and a strip of land extending laterally outward from the top of both banks to the widths defined below (see Figure 2-2). The SCA encompasses any jurisdictional wetland or unvegetated other waters within the stream channel, together with the adjacent uplands, and supersedes setback standards defined for WCAs. Human-made flood control channels under tidal influence are subject to the Bayland Conservation policies.

BIO-4.4 Promote Natural Stream Channel Function. Retain and, where possible, restore the hydraulic capacity and natural functions of stream channels in SCAs. Discourage alteration of the bed or banks of the stream, including filling, grading, excavating, and installation of storm drains and culverts. When feasible, replace impervious surfaces with pervious surfaces. Protect and enhance fish habitat, including through retention of large woody debris, except in cases where removal is essential to protect against property damage or prevent safety hazards. In no case shall alterations that create barriers to fish migration be allowed on streams mapped as historically supporting salmonids. Alteration of natural channels within SCAs for flood control should be designed and constructed in a manner that retains and protects the riparian vegetation, allows for sufficient capacity and natural channel migration, and allows for reestablishment of woody trees and shrubs without compromising the flood flow capacity where avoidance of existing riparian vegetation is not possible.

3.3.1.2 Environmental Setting

The proposed project is within the City of San Rafael in Marin County. The project region is generally an urban area near San Rafael Bay. Urban creeks drain to the Bay.

Although hills surround San Rafael on the north, west, and south sides, the project area is level, with elevations ranging from approximately 10 to 12 feet above sea level. The dominant land use in the project area is commercial development and the existing transit center in Downtown San Rafael. U.S. Highway 101 (US-101) is elevated above the east side of the project area.

Physical Conditions

The project area is in a developed area of office, retail, commercial, restaurant, residential, and parking uses and is partially beneath an elevated part of US-101. Within the project area, Irwin Creek is directly beneath and parallel to the elevated freeway and drains to San Rafael Creek at the southern end of the project area, within the Under the Freeway alternative.

Land Cover Types

A land cover type is defined as the dominant character of the land surface discernible from aerial photographs, as determined by vegetation, water, or human uses. Land cover types are the most widely used units in analyzing ecosystem function, habitat diversity, natural communities, wetlands and streams, and covered species habitat.

The three land cover types within the project area are described below. Ruderal and developed/ landscaped cover types are not considered sensitive natural communities and are not protected by regulatory agencies. However, the two perennial streams within the project area are non-wetland waters of the United States and waters of the State that would be subject to federal regulation under CWA Sections 401 and 404 and to state regulation under the Porter-Cologne Act and California Fish and Game Code Section 1602.

Perennial Stream

The project area includes approximately 0.5 acre of perennial stream. One perennial stream, Irwin Creek, occurs in the project area. Irwin Creek is channelized beneath US-101 and is crossed by two bridges in the project area, corresponding to 4th Street and 5th Avenue. At time of a site visit by a botanist/wetland ecologist and wildlife biologist in August 2020 (see Section 3.3.2.1, Methodology, for details), water in Irwin Creek was intermittently inundated up to approximately 2 feet deep in the parts of the low-flow channel. This stream has perennial flow due to the surrounding runoff from irrigation of urban landscaping, and storm drains empty into the creek at the 4th Street crossing. The creek is approximately 35 feet wide at the ordinary high-water mark. Approximately 400 feet south of the project area, Irwin Creek flows into San Rafael Creek. The bed of Irwin Creek is primarily gravel and sand, but cemented sandbags on the banks at each bridge crossing have been placed for erosion control. The creek does not support riparian vegetation in the project area, but there were many cut tree stumps on the bank. The creek bed supports patches of herbaceous vegetation. Approximately one block upstream of the project area, there are willows and other riparian trees along the creek banks. Due to poor water quality from landscaping and street runoff, lack of a natural channel due to channelization under US-101, and lack of riparian vegetation (cut tree stumps on the bank), Irwin Creek does not provide habitat for any special-status fish species.

Steelhead may access the creek occasionally as strays from San Pablo Bay, but because there is poor migratory, spawning, and rearing habitat, it is likely they would return to the bay.

At the southern edge of the project area, San Rafael Creek is parallel to 2nd Street and crosses under US-101 at the confluence with Irwin Creek. It is approximately 50 feet wide at this point. The creek flow was up to the bank edges at the time of the August 2020 survey. Upstream of the project area, San Rafael Creek extends through residential neighborhoods in the western part of San Rafael, and it drains to San Rafael Bay approximately 1.6 miles downstream of the project area.

Ruderal

Ruderal species grow along the fenceline that encloses both sides of Irwin Creek, in pavement cracks, and unmaintained landscape areas.

Developed/Landscaped

Most of the project area is developed and has landscaping associated with commercial and residential properties. Paved park-and-ride lots under US-101 are also included in this land cover type.

Special-Status Species

Special-status species are plants and animals that are legally protected under the ESA, CESA, or other regulations, and species considered sufficiently rare by the scientific community to qualify for such listing. For the purposes of this document, special-status species fall into the following categories.

- Species listed or proposed for listing as threatened or endangered under ESA (50 Code of Federal Regulations, Parts 17.11 [listed animals] and 17.12 [listed plants], and various notices in the Federal Register [proposed species])
- Species that are candidates for possible future listing as threatened or endangered under the ESA (84 Federal Register 54732 October 10, 2019)
- Species listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 CCR Section 670.5)
- Species that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines Section 15380)
- Animals listed as California species of special concern on CDFW's *Special Animals List* (CDFW 2020a)
- Animals that are fully protected in California under the California Fish and Game Code (Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians])
- Bats identified as medium or high priority on the Western Bat Working Group regional priority species matrix (Western Bat Working Group 2017)
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.)

- Plants considered by CDFW and the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Rare Plant Ranks 1B and 2) (CDFW 2020b; CNPS 2020)
- Plants identified by CDFW and CNPS as plants of limited distribution (Rare Plant Rank 3), (CDFW 2020b; CNPS 2020), which may be included as special-status species on the basis of local significance or recent biological information. Rare Plant Rank 4 species were not evaluated, due to the low quality of habitats in the project area.

Special-Status Plants

Based on a review of the U.S. Fish and Wildlife Service (USFWS) (2020) species list, the California Natural Diversity Database (CNDDB) (CDFW 2020b) records search, and CNPS Inventory (CNPS 2020), ~~38~~ 37 special-status plant species were identified as having potential to occur in the project area (Table 3.3-1 and Appendix ~~D~~G). Due to the level of previous and ongoing disturbance and urban development in the project area, none of the species in Table 3.3-1 and Appendix ~~D~~G are considered to have potential habitat in the project area. Blooming-period surveys for special-status plants have not been conducted in the project area but are not considered necessary because of the lack of suitable habitat in the project area, and special-status plants are not discussed further.

New Table 3.3-1. Special-Status Plants Known or with Potential to Occur near the San Rafael Transit Center Replacement Project Area

Common Name *Scientific Name*	Status Federal/State/ CNPS[a]	Geographic Distribution	Habitat Requirements	Blooming Period	Likelihood to Occur in the Project Area
Napa false indigo *Amorpha californica* var. *napensis*	–/–/1B.2	Monterey, Marin, Napa, and Sonoma Counties	Broadleaved upland forest (openings), chaparral, cismontane woodland; between 500–7,000 feet	April–July	None; potential habitat does not exist on site.
Bent-flowered fiddleneck *Amsinckia lunaris*	–/–/1.B.2	Inner North Coast Ranges, San Francisco Bay Area, west-central Great Valley	Coastal bluff scrub, valley and foothill grasslands, cismontane woodlands; below 1,650 feet	March–June	None; potential habitat does not exist on site.
Mount Tamalpais manzanita *Arctostaphylos montana* ssp. *montana*	–/–/1B.2	Central coast, northwest San Francisco Bay region, Mount Tamalpais, Marin County	Chaparral, valley and foothill grassland, serpentine soils between 530–2,500 feet	February–April	None; potential habitat does not exist on site.
Marin manzanita *Arctostaphylos virgata*	–/–/1B.2	Northern central coast, northwest San Francisco Bay region, and Marin County	Broadleaved upland forest, closed-cone coniferous forest, chaparral, North Coast coniferous forest on sandstone or granitic rock outcrops between 200–2,300 feet	January–March	None; potential habitat does not exist on site.
Thurber's reed grass *Calamagrostis crassiglumis*	–/–/2B.1	North Coast and northern Central Coast from Del Norte to Sonoma Counties; Nevada, Oregon, Washington, and elsewhere	Mesic coastal scrub, freshwater marshes and swamps; 30–190 feet	May–August	None; potential habitat does not exist on site. Irwin Creek and San Rafael Creek do not support marsh habitat.
Point Reyes bird's-beak *Chloropyron maritimum* ssp. *palustre*	–/–/1B.2	Humboldt, Sonoma, and Marin Counties; presumed extirpated in Alameda, Santa Clara, and San Mateo Counties	Marshes and swamps (coastal salt) below 32 feet	June–October	None; potential habitat does not exist on site.

Common Name *Scientific Name*	Status Federal/State/ CNPS[a]	Geographic Distribution	Habitat Requirements	Blooming Period	Likelihood to Occur in the Project Area
San Francisco Bay spineflower *Chorizanthe cuspidata* var. *cuspidata*	–/–/1B.2	Marin, Sonoma, and San Mateo Counties	Coastal scrub/sandy, coastal dunes, coastal prairie below 200 feet	April–July (August)	None; potential habitat does not exist on site.
Mt. Tamalpais thistle *Cirsium hydrophilum* var. *vaseyi*	–/–/1B.2	Northern San Francisco Bay, Mount Tamalpais, Marin County	Broadleaved upland forest, chaparral, meadows and seeps/serpentinite seeps between 780–2,000 feet	May–August	None; potential habitat does not exist on site.
Western leatherwood *Dirca occidentalis*	–/–/1B.2	Alameda, Contra Costa, Santa Clara, San Mateo, Sonoma, and Marin Counties	Broadleaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, riparian scrub between 30–1,650 feet	January–March (April)	None; potential habitat does not exist on site.
Tiburon buckwheat *Eriogonum luteolum* var. *caninum*	–/–/1B.2	Central inner north Coast Range, northern Central coast, and northern San Francisco Bay area: Alameda, Contra Costa, Marin, and Sonoma#* Counties	On sandy to gravelly serpentinite soils in chaparral, coastal prairie, oak woodland, valley and foothill grassland below 2,300 feet	May–September	None; potential habitat does not exist on site.
Minute pocket moss *Fissidens pauperculus*	–/–/1B.2	Humboldt, Monterey, Marin, and Santa Cruz Counties	North Coast coniferous forest (damp coastal soil) below 330 feet	N/A	None; potential habitat does not exist on site.
Marin checker lily *Fritillaria lanceolata* var. *tristulis*	–/–/1B.1	Marin County	Canyons and streambanks in coastal prairie, coastal scrub, coastal bluffs, often on serpentinite between 50–500 feet	February–April	None; potential habitat does not exist on site.
Wooly-headed gilia *Gilia capitata* ssp. *tomentosa*	–/–/1B.1	Sonoma and Marin Counties	Coastal bluff scrub (rocky outcrops) between 50–510 feet	May–July	None; potential habitat does not exist on site.

Common Name *Scientific Name*	Status Federal/State/ CNPS[a]	Geographic Distribution	Habitat Requirements	Blooming Period	Likelihood to Occur in the Project Area
Dark-eyed gilia *Gilia millefoliata*	–/–/1B.2	Del Norte, Humboldt, Mendocino, Marin, San Francisco*, and Sonoma Counties	Coastal dunes between 10–65 feet	April–July	None; potential habitat does not exist on site.
San Francisco gumplant *Grindelia hirsutula* var. *maritima*	–/–/3.2	Monterey#, Marin, Santa Cruz#, San Francisco, San Luis Obispo, and San Mateo Counties	Sandy or serpentinite soils in coastal bluff scrub, coastal scrub, valley and foothill grassland 50–1,300 feet	June–September	None; potential habitat does not exist on site.
Diablo rock rose *Helianthella castanea*	–/–/1B.2	Alameda, Contra Costa, Marin*, San Francisco*, and San Mateo Counties	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland between 200–4,265 feet	March–June	None; potential habitat does not exist on site.
Congested-headed hayfield tarplant *Hemizonia congesta* ssp. *congesta*	–/–/1B.2	Mendocino, Marin, San Francisco, San Mateo, and Sonoma Counties	Valley and foothill grassland, sometimes roadsides 65–1,830 feet	April–November	None; roadsides in project area are highly disturbed and support either ruderal or landscape vegetation. Project area is also below the elevation of the known range for the species.
Marin western flax *Hesperolinon congestum*	T/T/1B.1	Marin, San Francisco, and San Mateo Counties	Chaparral, valley and foothill grassland/ serpentinite below 1,215 feet	April–July	None; potential habitat does not exist on site.
Santa Cruz tarplant *Holocarpha macradenia*	T/E/1B.1	Alameda*, Contra Costa*, Monterey, Marin*, and Santa Cruz Counties	Coastal prairie, coastal scrub, valley and foothill grassland/often clay, sandy below 720 feet	June–October	None; potential habitat does not exist on site.

Common Name *Scientific Name*	Status Federal/State/ CNPS[a]	Geographic Distribution	Habitat Requirements	Blooming Period	Likelihood to Occur in the Project Area
Thin-lobed horkelia *Horkelia tenuiloba*	–/–/1B.2	Scattered occurrences in Mendocino, Marin, and Sonoma Counties	Broadleaved upland forest, chaparral/mesic openings, sandy, between 165–1,640 feet	May–July (August)	None; potential habitat does not exist on site.
Small groundcone *Kopsiopsis hookeri*	–/–/2B.3	Outer North Coast Ranges in Del Norte, Humboldt, Mendocino, Marin, and Trinity Counties; Oregon, Washington	North Coast coniferous forest, parasitic on *Gaultheria shallon* and *Vaccinium* spp. 300–2,900 feet	April–August	None; potential habitat does not exist on site.
Woolly-headed lessingia *Lessingia hololeuca*	–/–/3	Southern north Coast Ranges, southern Sacramento Valley, northern San Francisco Bay region, Alameda, Monterey, Marin, Napa, Santa Clara, San Mateo, Solano, Sonoma, and Yolo Counties	Clay or serpentinite soils of broadleaved upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland 50–1,000 feet	June–October	None; potential habitat does not exist on site.
Tamalpais lessingia *Lessingia micradenia* var. *micradenia*	–/–/1B.2	Endemic to Mount Tamalpais, Marin County	Chaparral, valley & foothill grassland/usually serpentinite, often roadsides between 330–1,640 feet	(June) July–October	None; potential habitat does not exist on site.
Mt. Diablo cottonweed *Micropus amphibolus*	–/–/3.2	Coast Ranges from Lake County to Santa Barbara County	Rocky sites in broadleaved upland forest, mixed evergreen forest, oak woodland, chaparral, valley and foothill grasslands 150–2,700 feet	March–May	None; potential habitat does not exist on site.
Marsh microseris *Microseris paludosa*	–/–/1B.2	Mendocino, Monterey, Marin, Santa Cruz, San Francisco*, San Luis Obispo, San Mateo*, and Sonoma Counties	Closed–cone conifer forest, cismontane woodland, valley and foothill grassland, and coastal scrub below 985 feet	April–June (July)	None; potential habitat does not exist on site.

Common Name *Scientific Name*	Status Federal/State/ CNPS[a]	Geographic Distribution	Habitat Requirements	Blooming Period	Likelihood to Occur in the Project Area
Baker's navarretia *Navarretia leucocephala* ssp. *bakeri*	–/–/1B.1	Colusa, Lake, Mendocino, Marin, Napa, Solano, Sonoma, and Tehama Counties	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools/ mesic between 50–5,700 feet	April–July	None; potential habitat does not exist on site.
Marin County navarretia *Navarretia rosulata*	–/–/1B.2	Marin and Napa Counties	Rocky serpentinite areas in chaparral, Sargent cypress forest between 650–2,100 feet	May–July	None; potential habitat does not exist on site.
White-rayed pentachaeta *Pentachaeta bellidiflora*	E/E/1B.1	San Mateo, Marin*, and Santa Cruz* Counties	Valley and foothill grassland, often serpentinite between 115–2,000 feet	March–May	None; potential habitat does not exist on site.
Hairless popcorn-flower *Plagiobothrys glaber*	–/–/1A	Historically known from Alameda, Merced*, Marin*, San Benito*, and Santa Clara* Counties	Meadows and seeps (alkaline), marshes and swamps (coastal salt) between 50–600 feet	March–May	None; potential habitat does not exist on site.
North Coast semaphore grass *Pleuropogon hooverianus*	–/T/1B.1	Scattered locations in Mendocino, Marin, and Sonoma Counties	Broadleaved upland forest, meadows and seeps, marshes and swamps (freshwater), North Coast coniferous forest, vernal pools/mesic between 33–2,100 feet	April–June	None; potential habitat does not exist on site. Irwin Creek and San Rafael Creek do not support marsh habitat.
Marin knotweed *Polygonum marinense*	–/–/3	Marin, Napa, Sonoma, and Solano Counties	Marshes and swamps (coastal salt or brackish) below 33 feet	(April) May–August (October)	None; potential habitat does not exist on site. Irwin Creek and San Rafael Creek do not support marsh habitat.
Tamalpais oak *Quercus parvula* var. *talampaisensis*	–/–/1B.3	Marin County: Mount Tamalpais	Lower montane coniferous forest 325–2,460 feet	March–April	None; potential habitat does not exist on site.

Common Name *Scientific Name*	Status Federal/State/ CNPS[a]	Geographic Distribution	Habitat Requirements	Blooming Period	Likelihood to Occur in the Project Area
Point Reyes checkerbloom *Sidalcea calycosa* ssp. *rhizomata*	–/–/1B.2	Mendocino, Marin, and Sonoma Counties	Marshes and swamps (freshwater, near coast) below 250 feet	April–September	None; potential habitat does not exist on site. Irwin Creek and San Rafael Creek do not support marsh habitat.
Marin checkerbloom *Sidalcea hickmanii* ssp. *viridis*	–/–/1B.1	Lake#, Marin, Napa, San Mateo, and Sonoma Counties	Chaparral (volcanic or serpentinite) between 165–1,400 feet	May–June	None; potential habitat does not exist on site.
Santa Cruz microseris *Stebbinsoseris glandulosus*	–/–/1B.2	Monterey, Marin, and Santa Cruz Counties	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland/open areas, sometimes on serpentinite between 33–1,640 feet	April–May	None; potential habitat does not exist on site.
Tamalpais jewelflower *Streptanthus batrachopus*	–/–/1B.3	Lake and Marin Counties, Mt. Tamalpais	Closed-cone coniferous forest, chaparral/ serpentinite between 1,000–3,130 feet	April–July	None; potential habitat does not exist on site.
Mt. Tamalpais jewel-flower *Streptanthus glandulosus* ssp. *pulchellus*	–/–/1B.2	Marin County; endemic to Mt. Tamalpais	Chaparral, valley and foothill grassland/ serpentinite between 490–2,620 feet	May–July (August)	None; potential habitat does not exist on site.
Showy Indian clover *Trifolium amoenum*	E/–/1B.1	Alameda*, Mendocino*, Marin, Napa*, Santa Clara*, Solano* and Sonoma* Counties, currently known from only two recent occurrences in Marin County	Coastal bluff scrub, valley and foothill grassland (sometimes serpentinite) below 1,360 feet	April–June	None; potential habitat does not exist on site.

Sources: CDFW 2020b; CNPS 2020.

* = Extirpated from this county.

\# = Uncertainty about distribution or identity.

[a] **Status explanations:**

Federal

E = listed as endangered under the ESA.

T = listed as threatened under the ESA.

– = No status definition.

State

E = listed as endangered under the CESA.

T = listed as threatened under the CESA.

– = No status definition.

California Native Plant Society Rare Plant Rank

1A = Plants presumed extirpated in California and either rare or extinct elsewhere.

1B = Plants rare, threatened, or endangered in California and elsewhere.

2A = Plants presumed extirpated in California but common elsewhere.

2B = Plants rare, threatened, or endangered in California but more common elsewhere.

3 = Review List: Plants about which more information is needed.

0.1 = Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

0.2 = Moderately threatened in California (20–80% occurrences threatened/moderate degree and immediacy of threat)

0.3 = Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

[b] **Definitions of occurrence likelihood:**

Low: Plant not known to occur in the region from the CNDDB or other documents in the vicinity of the project, or habitat conditions of poor quality.

None: Plant not known to occur in the region from the CNDDB or other documents in the vicinity of the project, or suitable habitat not present in any condition.

Special-Status Animals

Based on the USFWS (2020) species list, CNDDB (CDFW 2020b) records search, and fish resources identified under Section 3.3.2.1, 35 special-status animal species were identified as having potential to occur in the project area. Two species, green sea turtle (*Chelonia mydas*) and short-tailed albatross (*Phoebastria albatrus*), were excluded from consideration because these species only inhabit the open sea (and the albatross does not nest on land in the U.S.). Of the 33 special-status animal species identified, one species (pallid bat [*Antrozous pallidus*]) has moderate potential to occur in the project area based on its known range and presence of suitable habitat. The remaining 32 special-status animals have low to no potential to occur in the project area and are not discussed further. All 33 special-status animals that were considered are listed in Table 3.3-2 and Appendix ~~D~~G, which identifies their regulatory status, distribution, habitat requirements, and a rationale for their potential to occur in the project area. Pallid bat is discussed briefly below.

Pallid Bat and Roosting Colonies of Non-Special-Status Bats

Pallid bat is a California species of concern and is considered a high-priority species in California by the Western Bat Working Group. Pallid bat is found throughout most of California at low to middle elevations (6,000 feet) in a variety of habitats including desert, brushy terrain, coniferous forest, and non-coniferous woodlands. Daytime roost sites include rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are commonly under bridges but are also in caves and mines (Brown and Pierson 1996). Hibernation may occur during late November through March. Pallid bats breed from late October through February (Zeiner et al. 1990b:70) and one or two young are born in May or June (Brown and Pierson 1996).

CDFW requires that substantial roost colonies of non-special-status bats (such as Mexican free-tailed bat [*Tadarida brasiliensis*]) be protected from disturbance, especially during the breeding and hibernation seasons.

During the field survey, the ICF wildlife biologist examined the US-101 bridge structures and buildings within the project area for potential bat roosting habitat and evidence of bat use (i.e., guano piles, urine staining). The southbound US-101 bridge structure does not have crevices or other spaces on the underside of the bridge that could be used by bats. Open seams on the outside of this structure are too exposed and would not provide suitable roosting habitat. The northbound bridge structure contains open seams and wood boxes on the underside of the structure that provide potential bat roosting habitat. No signs of bat use were observed under or around the potential roosting habitat. Only one building in the project area, a dry-cleaning business with a barrel tile roof, contained potential bat roosting habitat (bats could roost under the curved tiles). The biologist walked around a portion of this building and did not see evidence of bat use, but a thorough survey was not conducted. Pallid bat and colonies of non-special-status bats could roost in the northbound US-101 bridge structure or dry-cleaning business in the project area.

New Table 3.3-2. Special-Status Animals Known or with Potential to Occur near the San Rafael Transit Center Replacement Project Area

Common Name *Scientific Name*	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Likelihood to Occur in the Project Area
Invertebrates				
Mimic tryonia (=California brackishwater snail) *Tryonia imitator*	–/–/–	Coastal areas from Salmon Creek, Sonoma County south to Tijuana River, San Diego County	Shallow water areas or coastal tidal lagoons, creeks, sloughs, estuaries, and salt marshes	Low—Irwin Creek provides low-quality habitat and known occurrence in San Rafael is extirpated.
Robust walker (snail) *Pomatiopsis binneyi*	–/–/–	Marin County	Freshwater	Low—Irwin Creek provides low-quality habitat and known occurrence in San Rafael is a museum record from 1979.
Marin hesperian *Vespericola marinensis*	–/–/–	Marin County	Moist areas in coastal brush and chaparral, alder woods, and mixed evergreen forest; found under cow-parsnip leaves, around spring seeps, and in leafmold along streams	None—no coastal brush or chaparral in project area.
Opler's longhorn moth *Adela oplerella*	–/–/–	Marin County and Oakland area on the inner coast ranges south to Santa Clara County; one record from Santa Cruz County; Carrizo Plain, San Luis Obispo; Butte County	Serpentine substrates that support the host plant, cream cups (*Platystemon californicus*); annual grassland	None—no grassland with serpentine substrate in project area.
Mission blue butterfly *Icaricia icarioides missionensis*	E/–/–	Occurs in a few locations in the San Francisco Bay area: San Bruno Mountain in San Mateo County, Twin Peaks in San Francisco County, the Marin Headlands in Marin County, and the Skyline ridges in San Mateo County	Coastal chaparral and grasslands with caterpillar food plants, *Lupinus* spp. (particularly silver lupine (*Lupinus albifrons*) and summer lupine (*Lupinus formosus*). Feeds on various nectar plants, which often include members of the sunflower family that grow in association with lupines.	None—no chaparral or grassland in the project area.
San Bruno elfin butterfly *Callophrys mossii bayensis*	E/–/–	Three remaining populations occur at Milagra Ridge, San Bruno Mountain, Montara Mountain in San Mateo County	North-facing slopes of coastal mountains; rocky outcrops and cliffs with annual grassland and coastal scrub; host plant is stonecrop (*Sedum*	None—project area is outside of species' known range; suitable habitat not present.

Common Name *Scientific Name*	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Likelihood to Occur in the Project Area
			spathulifolium), which occurs from 900 to 1,075 feet	
Marin elfin butterfly *Callophrys mossii marinensis*	–/–/–	Marin County	Redwood forest; broadleaf stonecrop (*Sedum spathulifolium*) is larval host plant	None—no redwood forest in the project area.
Myrtle's silverspot butterfly *Speyeria zerene myrtleae*	E/–/–	Previously inhabited dunes and bluffs from San Mateo County north to the mouth of the Russian River in Sonoma County; four populations persist in western Marin and southwestern Sonoma Counties	Inhabits coastal dunes, scrub, and grassland where its larval food plant, *Viola* sp., occurs; adult food plants include gumplant (*Grindelia rubicaulis*), yellow sand verbena (*Abronia latifolia*), mints (*Monardella* spp.), bull thistle (*Cirsium vulgare*), and seaside daisy (*Erigeron glaucus*)	None—no coastal dunes, scrub, or grassland in the project area.
San Francisco Bay Area leaf-cutter bee *Trachusa gummifera*	–/–/–	Central California Coast Range, Marin and San Francisco Counties	No information; documented visiting Pickeringia flowers (legume family)	Low—habitat information not available but unlikely to occur because of developed state of project area.
Western bumble bee *Bombus occidentalis occidentalis*	–/CE/–	Historically occurred throughout much of northern California but currently appears to be absent from much of this area; current known locations are high-elevation sites in northern California and a few sites on the northern California coast	Nests underground in squirrel burrows, mouse nests, and open west-southwest facing slopes bordered by trees. Visits a wide variety of wildflowers. Plant genera it is most commonly associated with are *Cirsium*, *Erigonum*, *Solidago*, "Aster," *Ceonothus*, *Centaurea*, and *Penstemon*.	None—no slopes with natural habitat and wildflowers in the project area.
Obscure bumble bee *Bombus caliginosus*	–/–/–	Occurs along the Pacific Coast, from Southern California to southern British Columbia, with scattered records from the east side of California's Central Valley; uncommon throughout its range	Inhabits coastal prairies and Coast Range meadows. Nesting occurs underground as well as above ground in abandoned bird nests. Food plants include *Ceanothus*, *Cirsium*, *Clarkia*, *Keckiella*, *Lathyrus*, *Lotus*, *Lupinus*, *Rhododendron*, *Rubus*, *Trifolium*, and *Vaccinium*.	None—no coastal prairie or meadow in the project area.

Common Name *Scientific Name*	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Likelihood to Occur in the Project Area
Fish				
Tidewater goby *Eucyclogobius newberryi*	E/SSC/–	Occur in lagoons of coastal streams from the Smith River, Del Norte County, to the south in Agua Hedionda Lagoon, San Diego County; extirpated from San Francisco Bay (Moyle 2002)	Lagoons, estuaries, marshes, and coastal streams; occasionally found in freshwater streams that are up-gradient and tributaries to brackish habitats	None—Irwin Creek does not provide suitable habitat due to its lack of natural channel and riparian vegetation, and poor water quality.
Delta smelt *Hypomesus transpacificus*	T/T/–	Primarily in the Sacramento–San Joaquin Estuary, but has been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River; range extends downstream to San Pablo Bay	Occurs in estuary habitat in the Delta where fresh and brackish water mix in the salinity range of 2–7 parts per thousand (Moyle 2002)	None—no estuaries in the project area and Irwin Creek does not provide estuary habitat.
Central California coast coho salmon *Oncorhynchus kisutch*	E/E/–	Coastal streams from Punta Gorda. Humboldt County, south to and including the San Lorenzo River, Santa Cruz County, as well as tributaries to the San Francisco Bay, excluding the Sacramento-San Joaquin River system	Occurs in cool (12–14°C), clear, well-oxygenated streams with deep (1.5 to 3 feet or more) pools and dense riparian (overhead) and submerged cover (e.g., undercut banks, woody material), particularly in the pools or runs (Moyle 2002; Moyle et al. 2008)	None—Irwin Creek does not provide suitable habitat due to its lack of natural channel and riparian vegetation, and poor water quality.
Longfin smelt *Spirinchus thaleichthys*	C/T/–	Within California, mostly in the Sacramento River–San Joaquin River Delta, but also in Humboldt Bay, Eel River estuary, and Klamath River estuary	Salt or brackish estuary waters with freshwater inputs for spawning	None—Irwin Creek does not provide suitable habitat due to its lack of natural channel and riparian vegetation, and poor water quality.
Green sturgeon (southern distinct population segment) *Acipenser medirostris*	T/SSC/–	Within California, occurs in the Sacramento, Feather, Klamath and Trinity Rivers and in the Delta (Moyle 2002)	Spawn in large river systems with well-oxygenated water, with temperatures from 8.0 to 14°C. Rear in freshwater and then brackish water.	None—Irwin Creek does not provide suitable habitat due to its lack of natural channel and riparian vegetation, and poor water quality.
River lamprey *Lampetra ayresi*	–/SSC/–	Sacramento, San Joaquin, and Napa Rivers; tributaries of San Francisco Bay (Moyle 2002; Moyle et al. 2015)	Adults live in the ocean and migrate into fresh water to spawn.	None—Irwin Creek does not provide suitable habitat due to its lack of natural channel and

Common Name *Scientific Name*	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Likelihood to Occur in the Project Area
				riparian vegetation, and poor water quality.
Pacific lamprey *Entosphenus tridentatus*	–/SSC/–	Sacramento, San Joaquin, and tributaries of San Francisco Bay, Delta (Moyle 2002; Moyle et al. 2015)	Ammocoetes live in freshwater for 5–7 years and then move toward the ocean. Feed on fish including salmon and flatfish. Adults return to freshwater to spawn and then die (California Fish Website 2022).	None—Irwin Creek does not provide suitable habitat due to its lack of natural channel and riparian vegetation, and poor water quality.
Amphibians				
California giant salamander *Dicamptodon ensatus*	–/SSC/–	Outer Coast Ranges from near the southern border of Mendocino County south through Marin County and the inner Coast Ranges in Napa, Sonoma, Lake, and Solano Counties; Santa Cruz Mountains in San Mateo, Santa Clara, and Santa Cruz Counties; found from sea level to 2,950 feet	Coastal coniferous forest, oak woodland and chaparral; cold permanent and intermittent streams required for breeding and larval development	None—no coastal coniferous forest, oak woodland, or chaparral in the project area.
California red-legged frog *Rana draytonii*	T/SSC/–	Found along the coast and coastal mountain ranges of California from Mendocino County to San Diego County and in the Sierra Nevada from Butte County to Stanislaus County	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation; may estivate in rodent burrows or cracks during dry periods	None—Irwin Creek does not have deep water and emergent or submergent vegetation for breeding; no suitable upland habitat in the project area.
Foothill yellow-legged frog (Northwest/ North Coast Population) *Rana boylii*	–/SSC/–	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet	Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. Usually found near riffles with rocks and sunny banks nearby.	None—no woodland, forest, chaparral or meadow in the project area; Irwin Creek in the project area provides low-quality habitat and is surrounded by development.
Reptiles				
Western pond turtle *Actinemys marmorata*	–/SSC/–	Uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or	None—no woodland, grassland, or open forest in the project area; Irwin Creek in the project area provides

Common Name *Scientific Name*	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Likelihood to Occur in the Project Area
		the Mojave Desert along the Mojave River and its tributaries	other aquatic vegetation in woodlands, grasslands, and open forests. Nests are typically constructed in upland habitat within 0.25 mile of aquatic habitat.	low-quality habitat and is surrounded by development; no suitable upland habitat.
Birds				
Northern spotted owl *Strix occidentalis caurina*	T/SSC/–	A permanent resident throughout its range; found in the north Coast, Klamath, and western Cascade Range from Del Norte County to Marin County	Dense old-growth or mature forests dominated by conifers with topped trees or oaks available for nesting crevices	None—no old growth or mature forest in the project area.
California Ridgway's rail *Rallus obsoletus obsoletus*	E/E/–	Marshes around the San Francisco Bay and east through the Delta to Suisun Marsh	Restricted to salt marshes and tidal sloughs; usually associated with heavy growth of pickleweed; feeds on mollusks removed from the mud in sloughs	None—no salt marsh or tidal slough in the project area.
California black rail *Laterallus jamaicensis coturniculus*	–/T,FP/–	Permanent resident of the San Francisco Bay and eastward through the Delta into Sacramento and San Joaquin Counties; small populations in Marin, Santa Cruz, San Luis Obispo, Orange, Riverside, and Imperial Counties	Tidal salt marshes associated with heavy growth of pickleweed; also occurs in brackish marshes or freshwater marshes at low elevations	None—no salt marsh, brackish marsh, or freshwater marsh in the project area.
Western snowy plover *Charadrius alexandrinus nivosus*	T/SSC/–	Nests along the entire coast of California from Del Norte to San Diego County adjacent to or near tidal waters, including along the mainland coast, peninsulas, offshore islands, and adjacent bays and estuaries; nests at inland lakes throughout northeastern, central, and southern California, including Mono Lake and Salton Sea	Nests and overwinters on coastal dune-backed beaches, barrier beaches, salt evaporation ponds, river gravel bars, and occasionally bluff-backed beaches. Inland, nests and overwinters on barren or sparsely vegetated areas at alkaline or saline lakes, reservoirs, ponds, and riverine sand bars, and at sewage, salt-evaporation, and agricultural wastewater ponds.	None—no coastal dunes, beaches, evaporation ponds, or river gravel bars in the project area.

Common Name *Scientific Name*	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Likelihood to Occur in the Project Area
California least tern *Sternula antillarum browni*	E/E/–	Nests on beaches along the San Francisco Bay and along the southern California coast from southern San Luis Obispo County south to San Diego County	Nests on sandy, upper ocean beaches and occasionally uses sparsely vegetated mudflats; forages on adjacent surf line, estuaries, and open ocean	None—no sandy beaches or estuaries in the project area.
Marbled murrelet *Brachyramphus marmoratus*	T/E/–	Nesting sites from the Oregon border to Eureka and between Santa Cruz and Half Moon Bay; winters in nearshore and offshore waters along the entire California coastline	Occupies nearshore areas, estuaries, and sounds; uses mature, coastal coniferous forests for nesting; nearby coastal water for foraging; nests in conifer stands greater than 150 years old and may be found up to 35 miles inland; winters on subtidal and pelagic waters often well offshore	None—no beaches, estuaries, or coastal coniferous forest in the project area.
San Pablo song sparrow *Melospiza melodia samuelis*	–/SSC/–	Northern portion of the San Francisco Bay and San Pablo Bay	Tidal salt marsh with dense vegetation for nesting, cover, and song posts; primarily associated with pickleweed and gumplant; highest densities are within tidal channels lined with gumplant; requires exposed ground for foraging	None—no tidal salt marsh in the project area.
Mammals				
Hoary bat *Lasiurus cinereus*	–/–/WBWG Medium	Occurs throughout California from sea level to 13,200 feet; winters in Southern California	Primarily roosts in forested habitats; also found in riparian areas and in park and garden settings in urban areas; day roosts within foliage of trees	Low—may drink or forage in the project area but suitable roosting habitat is not present.
Pallid bat *Antrozous pallidus*	–/SSC/WBWG High	Low elevations throughout California	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, mixed conifer, redwood, and giant sequoia habitats in Northern California, and oak woodland, grassland, and desert scrub in Southern California. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, basal hollows and	Moderate—crevices in the northbound US-101 bridge and some buildings provide suitable roosting habitat; may drink, forage, or roost in the project area.

Common Name *Scientific Name*	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Likelihood to Occur in the Project Area
			exfoliating bark of trees, bridges, and buildings.	
Townsend's big-eared bat *Corynorhinus townsendii*	–/SSC/WBWG High	Widespread throughout California, from low desert to mid-elevation montane habitats	Roosts in caves, tunnels, mines, buildings, and other cave-like spaces. Will night roost in more open settings, including under bridges.	Low—may drink or forage in the project area but suitable roosting habitat is not present.
Salt marsh harvest mouse *Reithrodontomys raviventris*	E/E, FP/–	San Francisco, San Pablo, and Suisun Bays; the Delta/San Francisco Bay area	Salt marshes with tall, dense, continuous stands of pickleweed; also uses mixed stands of native salt marsh vegetation that includes pickleweed; frequently uses grasslands adjacent to salt marsh	None—no salt marsh in the project area.

Status explanations:

Federal

E = listed as endangered under the ESA.

T = listed as threatened under the ESA.

P = protected under the Bald and Golden Eagle Protection Act.

– = no listing.

State

E = listed as endangered under the CESA.

T = listed as threatened under the CESA.

CT = candidate for threatened status under the CESA.

FP = fully protected under the California Fish and Game Code.

SSC = species of special concern in California.

– = no listing.

Other

Western Bat Working Group (WBWG) Priority

High: Species are imperiled or at high risk of imperilment.

Medium: This designation indicates a level of concern that should warrant closer evaluation, more research, and conservation actions of both the species and possible threats. A lack of meaningful information is a major obstacle in adequately assessing these species' status and should be considered a threat.

Potential Occurrence in the Project Area

High: Known occurrences of the species within the project area, or CNDDB or other documents record the occurrence of the species within a 5-mile radius of the project area and suitable habitat is present within the project area.

Moderate: CNDDB or other documents record the known occurrence of the species within a 5-mile radius of the project area and lower-quality or limited habitat is present or no known occurrences within 5 miles, but higher-quality suitable habitat is present within the project area.

Low: CNDDB or other documents do not record the occurrence of the species within a 5-mile radius of the project area and poor-quality suitable habitat is present within the project area.

Nesting Migratory Birds

Non-special-status migratory birds could nest in trees, shrubs, and ground vegetation in the project area. The breeding season for most birds is generally from February 15 to August 31. The occupied nests and eggs of migratory birds are protected by federal and state laws, including the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3503.5. USFWS is responsible for overseeing compliance with the Migratory Bird Treaty Act, and CDFW is responsible for overseeing compliance with the California Fish and Game Code and making recommendations on nesting bird protection. Migratory birds that are likely to nest in the project area are those that are common and highly adapted to human disturbance such as northern mockingbird (*Mimus polyglottos*) and western scrub jay (*Aphelocoma californica*).

Invasive Plant Species

Invasive plant species are species designated as federal noxious weeds by the U. S. Department of Agriculture, species listed by the California Department of Food and Agriculture, and invasive plants identified by the California Invasive Plant Council. Invasive plants displace native species, change ecosystem processes, alter plant community structure, and reduce wildlife habitat quality. ~~The plant species observed table in~~Table 3.3-1 and Appendix ~~D~~F lists~~s~~ the invasive plant species identified by the California Department of Food and Agriculture and California Invasive Plant Council that were observed during the botanical survey in the project area (California Department of Food and Agriculture 2021; California Invasive Plant Council 2021). Invasive plant species occur in ruderal and perennial stream land cover types in the project area. The infestation of the project area by these species generally is limited; they occur primarily as scattered individuals.

3.3.2 Environmental Impacts

Four different build alternatives, which are all in Downtown San Rafael within 500 feet of the existing transit center, are being evaluated. Impacts for the build alternatives are presented together unless they differ substantially among alternatives.

3.3.2.1 Methodology

The impact analysis for biological resources was conducted by evaluating the potential effects on special-status species and other biological resources that could result from project implementation. The proposed locations of transit center facilities under the various alternatives in the project area (see Figure 2-2) were evaluated for their potential to affect biological resources during construction and operation. Existing information listed below and information collected during the site visit were used to determine the presence or potential presence of biological resources in the project area. Potential effects on biological resources in the project area were based on the likelihood that construction or operation of the proposed project would directly or indirectly affect these resources. Construction-related impacts could result in temporary or permanent disturbance of biological resources in the project area. In assessing the magnitude of potential impacts, the following assumptions were made regarding construction- and operation-related impacts on biological resources:

- Potential construction-related effects include noise and ground disturbance caused by building demolition and removal, vegetation removal, grading, and transit center construction. All vegetation would be removed in areas that are cleared and graded for transit center facilities. Common animals in these areas would be displaced or destroyed during construction.
- Other than the limited area within and along Irwin Creek, the project area does not contain wildlife corridors. The developed nature of the project surroundings currently limits wildlife movement through the project and surrounding areas.
- Because the proposed project is within a highly developed area, indirect impacts on biological resources from operation of the transit center are not expected.
- Trees and other vegetation in the project area may be trimmed or removed.
- For the Under the Freeway Alternative, construction activities in Irwin Creek would include placement of structures to dewater the creekbed during construction, construction of ~~three~~ four ~~double-box~~ culverts for platforms and drive aisles, and placement of rock slope protection in the creek.

Review of Existing Information

The sources below were used to develop lists of special-status plant and animal species and to identify other sensitive biological resources (e.g., sensitive natural communities) that could be affected by the proposed project.

- CNPS's online *Inventory of Rare and Endangered Plants of California* records search of the San Rafael U.S. Geological Survey 7.5-minute quadrangle (CNPS 2020)
- CNDDB records search of the San Rafael U.S. Geological Survey 7.5-minute quadrangle (CDFW 2020b)
- Information for Planning and Consultation Resource List (unofficial USFWS list of endangered and threatened species that may occur in the project area or be affected by the proposed project) (USFWS 2020)
- *Fish Species of Special Concern in California* (Moyle et al. 2015), *Inland Fishes of California* (Moyle 2002), and the California Fish Website (University of California, Davis 2021)

Due to the developed nature of the project area, the CNPS inventory and CNDDB records search were limited to the San Rafael U.S. Geological Survey quadrangle rather than obtaining an inventory from and search of additional quadrangles, as is usual practice. The USFWS, CNDDB, and CNPS lists can be found in Appendix ~~E~~G.

Field Survey

An ICF botanist/wetland ecologist and wildlife biologist conducted a survey of the project area on August 5, 2020. The project area encompassed the footprints of all alternatives as shown on Figure 2-2. The biologists walked transects throughout the project area and identified land cover types and potential habitat for special-status species. The wildlife biologist examined the US-101 bridge structures and buildings within the project area, identified potential bat roosting habitat, and looked for evidence of bat use (i.e., guano piles, urine staining). The biologists also walked to as close as possible to the confluence of Irwin and San Rafael Creeks to determine if there were any barriers between Irwin Creek and San Rafael Creek. Lists of plant and animal species observed were

recorded and representative photographs of the project area were taken. Lists of plants and animals observed in the project area are provided in ~~Tables 3.3-1 and 3.3-2 and~~ Appendix ~~D~~F.

3.3.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to biological resources.

Would the proposed project:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

3.3.2.3 Impacts

Impact BIO-1: Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on Any Species Identified as a Candidate, Sensitive, or Special-Status Species in Local or Regional Plans, Policies, or Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

Construction

Pallid Bat and Roosting Colonies of Non-Special-Status Bats

Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives

Construction of the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would not result in removal or disturbance of suitable roosting habitat for pallid bat or non-special-

status bats. Therefore, these alternatives would have ***no impact*** on pallid bat or colonies of non-special-status bats.

Under the Freeway Alternative

Construction of the Under the Freeway Alternative would result in disturbance of potential bat roosting habitat in the northbound US-101 bridge structure when construction activities are conducted under and near the bridge. However, the ambient noise level is high due to road noise above and adjacent to the bridge and construction noise is unlikely to result in effects on bats that may be roosting in the bridge. Construction of the Under the Freeway Alternative would result in the removal of one building that provides potential bat roosting habitat. If pallid bats or a colony of non-special-status bats are using this building for roosting, bats could be injured or killed during demolition. Removal of occupied roost habitat would also displace bats, causing them to relocate to another roost site and potentially compete with other bats for the roost site. Because pallid bat is considered imperiled or is at high risk of imperilment (Western Bat Working Group 2017) and non-special-status bat colonies are rare, the injury or mortality of pallid bat or a colony of non-special-status bats and the removal of roosting habitat would be considered a **significant** impact. Implementation of Mitigation Measures MM-BIO-CNST-1 and MM-BIO-CNST-2 would reduce this impact to a less-than-significant level. Therefore, the impact would be ***less than significant with mitigation***.

Operations

All Build Alternatives

Operation of the San Rafael Transit Center, under any alternative, is not anticipated to result in impacts on any candidate, sensitive, or special-status species. Therefore, operations from any alternative would have ***no impact*** on pallid bat and roosting colonies of special-status bats.

Mitigation Measures

If the Under the Freeway Alternative is selected and constructed, Mitigation Measures MM-BIO-CNST-1 and MM-BIO-CNST-2 would be implemented to reduce potential impacts on pallid bat and roosting colonies of special-status bats.

MM-BIO-CNST-1: Conduct Environmental Awareness Training for Construction Employees

The project proponent shall retain a qualified biologist to conduct environmental awareness training for construction crews before project implementation. The awareness training shall be provided to all construction personnel and shall brief them on the need to avoid effects on sensitive biological resources (i.e., pallid bat and roosting colonies of bats, Irwin Creek, and active nests of migratory birds) in and adjacent to the construction area. The education program shall include a brief review of pallid bat (including its legal status, life history, habitat requirements, and photographs of the species) and shall identify potential roosting habitats in the project area. The training shall also include information on the locations of any active migratory bird nests in the project area. The biologist shall describe the protective measures that must be adhered to by all construction personnel to reduce or avoid effects on sensitive biological resources during project implementation. This includes the steps to be taken if a

sensitive species or an active migratory bird nest is found within the construction area (i.e., notifying the crew foreman, who will call the City's designated biologist).

In addition, construction employees shall be educated about the importance of controlling and preventing the spread of invasive plant infestations. An environmental awareness handout that describes and illustrates sensitive resources to be avoided during project construction and identifies all relevant permit conditions shall be provided to each crew member. The crew foreman shall be responsible for ensuring that crew members adhere to the guidelines and restrictions. Education programs shall be conducted for appropriate new personnel as they are brought on the job during the construction period.

MM-BIO-CNST-2. Conduct Preconstruction Surveys for Bats and Implement Protective Measures

Prior to removal of the dry-cleaning business that provides potential bat roosting habitat, a qualified bat biologist and/or a professional bat removal expert shall conduct an initial daytime survey to look for bats and evidence of bat use and/or presence. The biologist and/or the professional bat removal expert shall examine both the inside and outside of the building for potential roosting habitat, as well as routes of entry to the structure. If all areas of the building can be examined and no signs of bat use are present, a follow-up preconstruction survey of the interior and exterior of the structure by a qualified biologist shall be conducted within 24 hours of demolition.

If all areas of the building can be examined and bats or signs of bat use are observed, the following measures shall be implemented:

- The qualified bat biologist and/or professional bat removal expert shall exclude bats from using the building as a roost site, such as by sealing off entry points. Prior to installing exclusion measures, the qualified biologist and/or professional bat removal expert shall re-survey the structure to ensure that no bats are present.
- Installation of exclusion devices shall occur before the maternity season and prior to hibernation, generally from March 1 to 30 or September 15 to October 30, to preclude bats from occupying a roost site during demolition. Exclusionary devices shall only be installed by an experienced bat biologist or professional bat removal expert.
- A preconstruction survey of the interior and exterior of the structure shall be conducted within 24 hours of demolition to confirm that no bats are present.

If all areas of the building cannot be examined or if bats or signs of bat use are present and exclusion measures are not or cannot be installed as described above, the following protective measures shall be implemented:

- The qualified biologist shall work with the project proponent and CDFW to develop a plan to discourage or exclude bat use prior to demolition. The plan may include installing exclusion measures or using light or other means to deter bats from using the structure to roost. CDFW may recommend surveys to identify bat species present using night goggles or active acoustic monitoring using full-spectrum bat detectors.
- A preconstruction survey of the interior and exterior of the building shall be conducted within 24 hours of demolition.

- To avoid impacts on maternity colonies or hibernating bats, the structure shall not be demolished while bats are present, generally between April 1 and September 15 (maternity season) and from October 30 to March 1 (hibernation).
- Removal of roosting habitat shall only occur only following the maternity season and prior to hibernation, generally between September 15 and October 30, unless exclusionary devices are first installed.

CDFW may require compensatory mitigation for the loss of roosting habitat depending on the species present and size of the bat roost. Compensation, if required, shall be determined in consultation with the CDFW, and may include the construction, installation, and monitoring of suitable replacement habitat on site or near the project area.

Impact BIO-2: Have a Substantial Adverse Effect on any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

All Build Alternatives

The project area does not support any riparian habitat. The only sensitive natural community is the perennial stream, Irwin Creek. Impacts on this creek are analyzed below. Therefore, there would be ***no impact*** on riparian habitat or non-creek sensitive natural community related to construction or operations.

Mitigation Measures

No mitigation is required.

Impact BIO-3: Have a Substantial Adverse Effect on State or Federally Protected Wetlands (Including, but not Limited to, Marsh, Vernal Pool, Coastal, etc.) through Direct Removal, Filling, Hydrological Interruption, or Other Means

State and federally protected wetlands in the State CEQA Guidelines are intended to also include non-wetland waters. Therefore, this impact includes the potential effects on Irwin Creek in the project area. Irwin Creek is a water of the United States, subject to regulation under CWA Section 404 and under the jurisdiction of USACE, and is a water of the State subject to regulation under the Porter-Cologne Act and under the jurisdiction of the RWQCB.

Construction

Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives

San Rafael Creek is outside of the project area. Construction of the proposed project, therefore, would have no impact on San Rafael Creek. Construction of the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would have no effect on Irwin Creek, because the creek is outside of the project footprints for these alternatives. There would be ***no impact***, and no mitigation is required.

Under the Freeway Alternative

Implementation of the Under the Freeway Alternative would result in the placement of up to 0.27 acre of permanent fill in Irwin Creek for construction of four double-box culverts with two openings up to 12 feet wide at Platforms A, D, and E. Rock slope protection would also be placed in the creek bed.

A total of up to 0.54 acre of temporary impacts on perennial stream in Irwin Creek would result from temporary structures placed below the ordinary high-water mark to dewater and temporarily reroute the creek during construction for installation of the box culverts.

Additional indirect impacts from project construction on water quality, such as increased turbidity and chemical runoff, could occur in perennial drainage habitat outside the project area. Water quality protection measures to avoid this impact would be required and implementation of construction site BMPs specified in the final Stormwater Pollution Prevention Plan would be developed for the proposed project, as well as CWA Section 401 permit conditions to minimize introduction of construction-related contaminants and mobilization of sediment in Irwin Creek. Broadly, these BMPs would address soil stabilization, sediment control, wind erosion control, vehicle tracking control, non-stormwater management, and waste management practices. The BMPs would be based on the best conventional and best available technology.

State and federal agencies would require avoidance, minimization, and compensatory mitigation for the loss of perennial streams. The loss of perennial streams would be a **significant** impact because perennial streams provide a variety of important ecological functions and values. Implementation of Mitigation Measures MM-BIO-CNST-3 through MM-BIO-CNST-5 would ensure that the proposed project minimizes effects on perennial streams adjacent to the project construction area and compensates for the loss of perennial streams in the project area. Therefore, the impact would be ***less than significant with mitigation***.

Operations

Operation of the San Rafael Transit Center, under any alternative, would result in ***no impact*** on Irwin Creek or San Rafael Creek.

Mitigation Measures

If the Under the Freeway Alternative is selected and constructed, Mitigation Measures MM-BIO-CNST-1 (discussed above) and MM-BIO-CNST-3, MM-BIO-CNST-4, and MM-BIO-CNST-5 would be implemented to reduce potential impacts on protected wetlands.

MM-BIO-CNST-3: Install Orange Construction Fencing Between the Construction Area and Adjacent Sensitive Biological Resources

The project proponent or their contractor shall install orange construction fencing between the construction area and adjacent sensitive biological resource areas. Sensitive biological resources adjacent to the construction area that could be directly affected by the proposed project include Irwin Creek upstream and downstream of the construction area, active nests of migratory birds, and trees to be retained in the project area.

Barrier fencing around sensitive biological resource areas shall be installed as one of the first orders of work and prior to equipment staging. Before construction begins, the construction

contractor shall work with the project engineer and a resource specialist to identify the locations for the orange construction fencing and shall place stakes around the sensitive resource sites to indicate these locations. The protected areas shall be designated as environmentally sensitive areas and clearly identified on the construction plans and described in the specifications. To minimize the potential for snakes and other ground-dwelling animals to be caught in the orange construction fencing, the fencing shall be placed with at least a 1-foot gap between the ground and the bottom of the fencing. The exception to this condition is where construction barrier fencing overlaps with erosion control fencing and must be secured to prevent sediment runoff. Barrier fencing shall be installed before construction activities are initiated, maintained throughout the construction period, and removed after completion of construction.

MM-BIO-CNST-4: Conduct Periodic Biological Monitoring

The project proponent shall retain a qualified biological monitor for the proposed project who shall visit the site periodically and a minimum of once per week during in-water construction work to ensure that fencing around environmentally sensitive areas is intact and that activities are being conducted in accordance with the agreed-upon project schedule and agency conditions of approval. The monitor shall provide the project proponent with a monitoring log for each site visit.

MM-BIO-CNST-5: Compensate for Temporary and Permanent Loss of Perennial Stream

The project proponent shall compensate for both temporary and permanent loss of perennial stream in compliance with the state (Section 401 Water Quality Certification or waste discharge requirements, Lake and Streambed Alteration Agreement) and federal (Section 404 permit) processes for the work that would occur in Irwin Creek. Specifically, the project proponent shall compensate for temporary impacts (impacts occurring during construction) on up to 0.54 acre of non-wetland waters of the United States in Irwin Creek by restoring the creek bed and bank to pre-project contours when construction is complete. Because there is little to no vegetation in the creek, no revegetation is necessary.

The project proponent shall compensate for the permanent fill of up to 0.27 acre of non-wetland waters of the United States in Irwin Creek by purchasing mitigation bank credits, which can be in the form of preservation and/or creation credits using the following minimum ratios:

- A minimum of 2:1 (2 acres of mitigation for each acre filled), for a total of up to 0.54 acre, if credits are for preservation of habitat; or
- A minimum of 1:1 (1 acre of mitigation for each acre filled), for a total of up to 0.27 acre if credits are for creation of habitat.

The actual compensation ratios shall be determined through coordination with the San Francisco Bay RWQCB and CDFW (Section 401 Water Quality Certification or waste discharge requirements, Lake and Streambed Alteration Agreement) and USACE (Section 404 permit) as part of the permitting process. The project proponent shall provide written evidence to the resource agencies that compensation has been established through the purchase of mitigation credits.

Impact BIO-4: Interfere Substantially with the Movement of Any Native Resident or Migratory Fish or Wildlife Species or with Established Native Resident or Migratory Wildlife Corridors, or Impede the Use of Native Wildlife Nursery Sites

Construction

Fish and Wildlife Movement

Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives

Construction of the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would not interfere with fish or wildlife movement because there are no streams or other natural areas in the footprints of these project sites that provide corridors for fish or wildlife. Therefore, the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would have ***no impact*** on fish or wildlife movement.

Under the Freeway Alternative

The only semi-natural corridor through the Under the Freeway Alternative project site is Irwin Creek. Large box culverts under the creek road crossings allow fish and wildlife to move relatively unimpeded through this corridor. Common fish, birds, and some mammals could utilize the creek corridor for movement. Installation of cofferdams or other construction activities in Irwin Creek for the new bridges/viaducts for the Under the Freeway Alternative could temporarily interfere with movement through this corridor. This impact would be short term and temporary and would only affect animals that are common in developed areas. As such, this impact would be ***less than significant*** and no mitigation is required.

Native Wildlife Nursery Sites

All Build Alternatives

Native wildlife nursery sites in the project area consist of trees, shrubs, and ground vegetation that provide nesting habitat for migratory birds. Construction of the Move Whistlestop, Adapt Whistlestop, and 4th Street Gateway Alternatives would result in the removal or trimming of landscape trees associated with commercial properties. Construction of the Under the Freeway Alternative would result in removal or trimming of landscaped trees and shrubs in residential and commercial properties and ground vegetation along Irwin Creek. Vegetation removal during the nesting season of migratory birds (generally February 15 through August 31) could result in the injury or mortality of nesting birds. Because the proposed project is in an area with high human disturbance, noise, and activity, construction noise and visual disturbance during the nesting season are not anticipated to affect birds nesting in vegetation that is near the project area but would not be removed as a result of the proposed project. Removal or destruction of nests or construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. This impact could be **significant** if it resulted in the reduction of local populations of migratory birds. To ensure that active nests are not disturbed and that the Migratory Bird Treaty Act and California Fish and Game Code are not violated, Mitigation Measures MM-BIO-CNST-1 and MM-BIO-CNST-6 would be implemented. With implementation of

these Mitigation Measures, the impact on nesting migratory birds would be ***less than significant with mitigation***.

Operations

All Build Alternatives

Operation of the San Rafael Transit Center, under any alternative, would not interfere with any fish and wildlife movement or native wildlife nursery sites and therefore would have ***no impact*** on fish and wildlife movement or native wildlife nursery sites.

Mitigation Measures

Under any build alternative that is selected and constructed, Mitigation Measures MM-BIO-CNST-1 (discussed above) and BIO-CNST-6 would be implemented to reduce potential impacts on nesting migratory birds.

MM-BIO-CNST-6: Conduct a Preconstruction Survey for Nesting Birds and Implement Protective Buffers Around Active Nests

If work is scheduled to begin during the nesting bird season (February 15 through August 31), a qualified biologist shall conduct a preconstruction survey for nesting birds no more than 14 days before any tree or shrub trimming or removal or clearing of ground vegetation. If vegetation trimming, removal, or clearing does not begin within 14 days of the survey, vegetation to be affected shall be resurveyed for active nests. If an active nest is found in the survey area, the biologist shall determine and establish a no-work buffer around the active nest to limit disturbance until the nest is no longer active. The extent of the buffer shall depend on the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species. The biologist shall periodically monitor the nest to determine when the nest is no longer active and the buffer can be removed. Should an active bird nest be found in the project area during work activities, work in that area shall cease and the biologist shall be contacted to establish an appropriate no-work buffer zone.

Impact BIO-5: Conflict with Any Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance

All Build Alternatives

Construction

Construction of any of the build alternatives would not conflict with any local general plan policies protecting biological resources. The City of San Rafael tree ordinance requires total removal of tree stumps and roots for removed trees, which would occur under any alternative for any trees in the project area. As part of the project approval by the City, the project proponent would be required to obtain a permit from the San Rafael Public Works Department for tree removal. Construction activities for any alternative could potentially damage trees to be retained in the project area. This would be a potentially **significant** impact. Implementation of Mitigation Measure MM-BIO-CNST-3

would provide a sufficient safeguard against inadvertent damage associated with construction activities and would reduce this potential impact to ***less-than-significant levels with mitigation***.

Operations

Operation of the San Rafael Transit Center, under any alternative, would not conflict with any local policies or ordinances protecting biological resources, and there would be ***no impact***.

Mitigation Measures

Under any alternative that is selected and constructed, Mitigation Measure MM-BIO-CNST-3 (discussed above) would be implemented to reduce potential impacts on trees to be retained in the project area.

Impact BIO-6: Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan

All Build Alternatives

Construction

Marin County does not have a habitat conservation plan (HCP) or natural community conservation plan (NCCP) and there are no regionwide HCPs or NCCPs that encompass the project area. Therefore, construction of any of the alternatives would not conflict with any adopted HCP, NCCP, or other approved plan, and there would be ***no impact***.

Operations

Marin County does not have an HCP or NCCP and there are no regionwide HCPs or NCCPs that encompass the project area. Therefore, operation of San Rafael Transit Center under any alternative would not conflict with any adopted HCP, NCCP, or other approved plan, and there would be ***no impact***.

Mitigation Measures

No mitigation measures are required.