

## Biological Resources Report



**Redwood City Ferry Terminal Project  
Biological Resources Report**

**H. T. Harvey #4768-01**

Prepared for:

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August 27, 2026

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# Section 1. Introduction

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This report describes the biological resources present in the Redwood City Ferry Terminal Project project area, as well as the potential biological impacts of proposed project development activities and measures necessary to reduce these impacts to less-than-significant levels under the California Environmental Quality Act (CEQA). This assessment is based on the proposed project's plans and description provided to H. T. Harvey & Associates by the Port of Redwood City project team through October 2025.

## 1.1 Project Location

The project area consists of the project site and landside components where construction would occur (collectively termed the *terminal project area* in this report) and the ferry routes in Redwood Creek, Westpoint Slough, and San Francisco Bay (Figure 1). The approximately 14-acre terminal project area consists of the 9.2 acres project site (Assessor's Parcel Number 0543300998) located just north of 876 Seaport Boulevard in Redwood City on land owned by the Port of Redwood City (Port), which includes both waterside and landside components, as well as the Seaport Boulevard Corridor, waterfront park, western public parking lot and maintenance building, relocated maintenance building site, a frontage road, and relocated railroad tracks (Figure 2). The project site is bordered by Redwood Creek to the west; Westpoint Slough to the north; Frontage Road and Union Pacific Railroad tracks to the east; and an aggregate and cement marine terminal operated by Cemex Construction Materials (CEMEX) to the south (Figure 1). Bair Island is across Redwood Creek to the west and northwest of the project site, and Greco Island is across Westpoint Slough to the north and northeast. Opposite the railroad tracks to the east is Seaport Boulevard and the Pacific Shores Center office complex and parking lots. Immediately east of the project site is a publicly accessible waterfront park, a portion of the Bay Trail, a public parking lot for the waterfront park (referred to herein as the western public parking lot), and a small maintenance building. The terminal project area is located in the *Redwood Point, California* 7.5-minute United States Geological Survey (USGS) quadrangle.

### 1.1.1 Seaport Boulevard Corridor

Seaport Boulevard is a four-lane public roadway that extends in a generally north/south direction from U.S. Route 101 to the entrance of the Pacific Shores Center, where it becomes a private two-lane loop road that provides access to the Pacific Shores Center and waterfront park. The western leg of the loop road would be used to access the project site. There are two driveways on the northwestern side of the Seaport Boulevard loop road into the western public parking lot east of the project site. The Seaport Boulevard Corridor extends from the entrance to the Pacific Shores Center to the project site entrance and includes the existing roadway and approximately 10 to 13 feet of land on both sides of the roadway that consists primarily of a landscaped buffer on either side and driveways into the Pacific Shores Center parking lots, the Seaport Boulevard intersection at Pacific Shores Center entrance, and approximately 200 feet of the eastern leg of the loop road



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**H. T. HARVEY & ASSOCIATES**  
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**Figure 1. Vicinity Map**  
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and 30 feet of the landscape buffer and parking lot to the southwest of this roadway segment. To the west of Seaport Boulevard, the landscaped buffer varies from approximately 30 feet to 180 feet in width, and includes a berm that separates Seaport Boulevard from Frontage Road, the railroad tracks, and Port properties. The distance between Seaport Boulevard and Frontage Road varies from over 200 feet at the Pacific Shores Center entrance to approximately 35 feet at the closest point. The landscape buffer east of Seaport Boulevard is approximately 20 feet in width and it separates Seaport Boulevard from the Pacific Shores Center parking lots and turf field that is part of the Pacific Shores Club fitness center. There are underground utilities, aboveground utility boxes, and streetlights located within the corridor. As a transportation corridor, Seaport Boulevard does not have a land use designation or zoning classification. The land use designation of the land east of Seaport Boulevard within the Seaport Boulevard Corridor is O (Commercial - Office Professional/Technology) and the corresponding zoning classification is CP (Commercial Park).

### **1.1.2 Waterfront Park**

The publicly accessible waterfront park is directly north of the Pacific Shores Center and extends along the length of Westpoint Slough from the project site on the west to Northpoint Court and the Westpoint Marina on the east. The waterfront park includes a segment of the Bay Trail, an unpaved trail that extends westward from the Bay Trail towards the project site (the ferry terminal site), and three circular concrete plazas with seating areas near the water's edge. There are public parking lots on the western and eastern ends of the park and crosswalks on Seaport Boulevard that provide access from Seaport Boulevard and the Pacific Shores Center. The park is primarily dominated by landscaped vegetation, trees, and turf grass. To the north is Westpoint Slough and Greco Island, to the south is the Pacific Shores Center parking lots and office buildings, to the west is the project site, and to the east is Westpoint Marina.

The Redwood City General Plan land use map designates the waterfront park in the project area as O (Commercial – Office Professional/Technology) and OS-SF (Open Space – San Francisco Bay) and the corresponding zoning classification is CP (Commercial Park) and IP (Industrial Park).

### **1.1.3 Western Public Parking Lot and Maintenance Building Site**

A portion of the western public parking lot for the waterfront park is within the project area. It is located directly east of the project site and north of the Pacific Shores Center. The parking lot has approximately 70 spaces and two driveways on either end of the lot that connect to Seaport Boulevard. There is a cinderblock maintenance building, approximately 1,000 square feet in size (approximately 40 feet by 25 feet), located off of the southern parking lot driveway. It has five additional parking spaces and a roll up door and driveway ramp. There is a paved connection from the parking lot to Frontage Road and the project site, however, access between the two properties is prevented by bollards and a gated chain-link fence.

The western public parking lot is part of the Pacific Shores Center which has a land use designation of O (Commercial – Office Professional/Technology) and a corresponding zoning classification of CP (Commercial Park).

#### **1.1.4 Relocated Maintenance Building Site**

The existing maintenance building located adjacent to the western public parking lot for the waterfront park would be demolished and replaced by a new building of similar size and construction at a new location within the Pacific Shores Center property. The specific location would be within the Pacific Shores property as selected by the Pacific Shores Center management based on their operational and site planning needs. The Pacific Shores Center has a land use designation of O (Commercial – Office Professional/Technology) and a corresponding zoning classification of CP (Commercial Park).

#### **1.1.5 Frontage Road and Relocated Railroad Tracks**

Approximately 1,200 feet of Frontage Road from about 500 feet north of Hinman Road to the terminus at the project site entrance would be vacated. The portion of railroad track located between the project site and the waterfront park would be removed and an equivalent or greater length of tracks would be established south of the project site within the footprint of the vacated segment of Frontage Road.

As a transportation corridor, Frontage Road and the railroad tracks do not have a land use designation or zoning classification. The land use designations of the adjacent land within the project area is M (Marina) and IP (Industrial – Port Related) to the west and LI (Light Industrial) and O (Commercial – Office Professional/Technology) to the east. The corresponding zoning classifications of the adjacent land is GI (General Industrial) to the west and Commercial Park (CP) to the east.

#### **1.1.6 San Francisco Bay (including Redwood Creek and Westpoint Slough)**

The project site is located at the confluence of Redwood Creek and Westpoint Slough, both of which are tidal sloughs with direct connections to the San Francisco Bay. Redwood Creek is to the west of the project site and Westpoint Slough is to the north. These water channels flow into the San Francisco Bay, which is a large bay that parallels the coastline and flows into the Pacific Ocean through the Golden Gate strait. San Francisco Bay is adjacent to many communities in the Bay Area, such as San Francisco, Redwood City, Mountain View, Fremont, and Oakland. The project site and Redwood City are located on the southwestern side of the San Francisco Bay. The water areas within Redwood City, including Redwood Creek and Westpoint Slough, have a land use designation of OS – SF (Open Space – San Francisco Bay) and a zoning classification of TP (Tidal Plain).

San Francisco Bay is considered part of the project area (and referred to as the ferry routes) in that the ferries of the proposed new ferry service would transit the Bay while enroute to their destinations. The analysis of the proposed project focuses on the portion of the Bay where impacts would most likely occur, which are Redwood Creek and Westpoint Slough. However, any impacts that could affect other areas in the Bay are also evaluated as applicable.

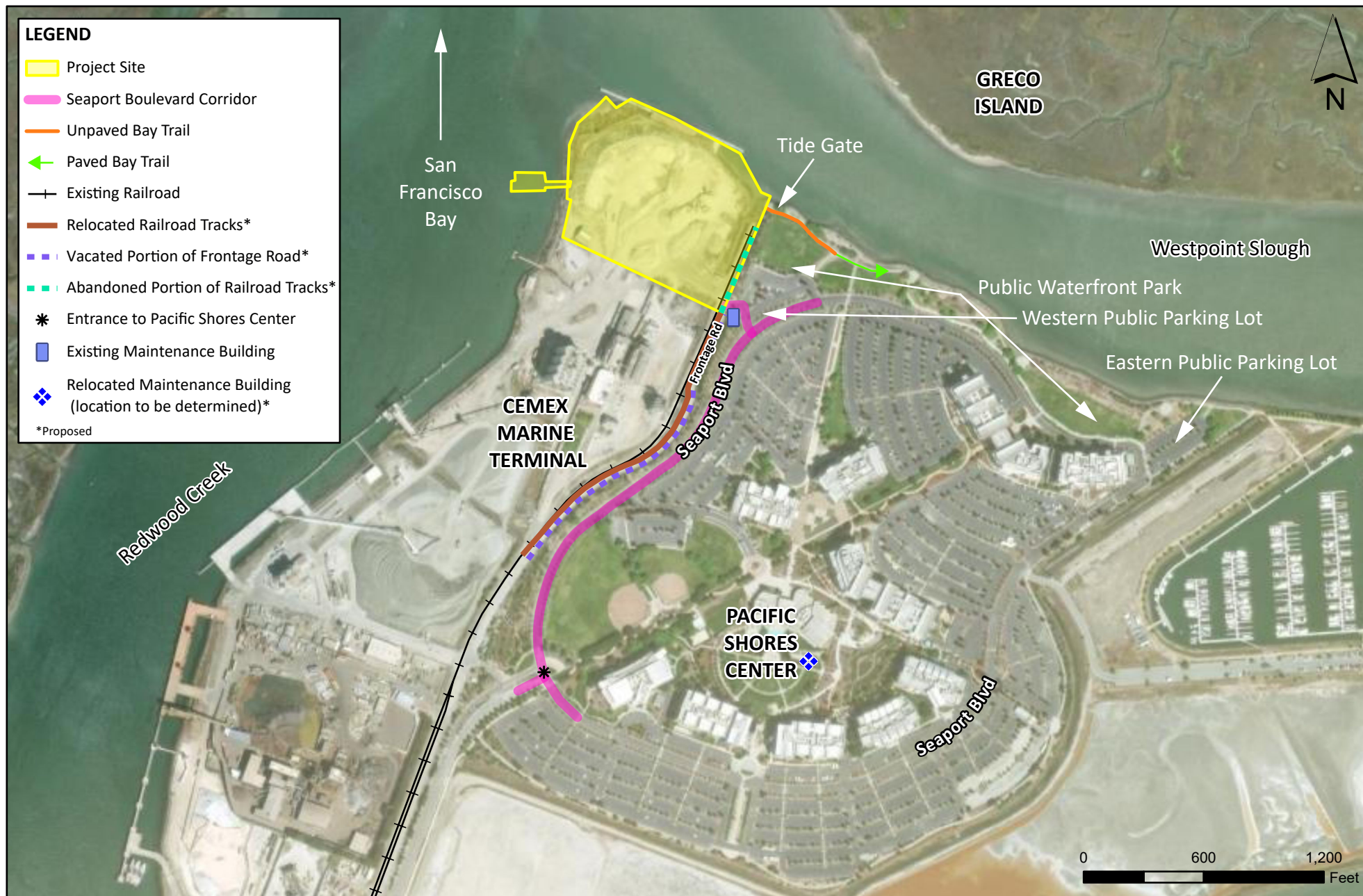
## 1.2 Project Description

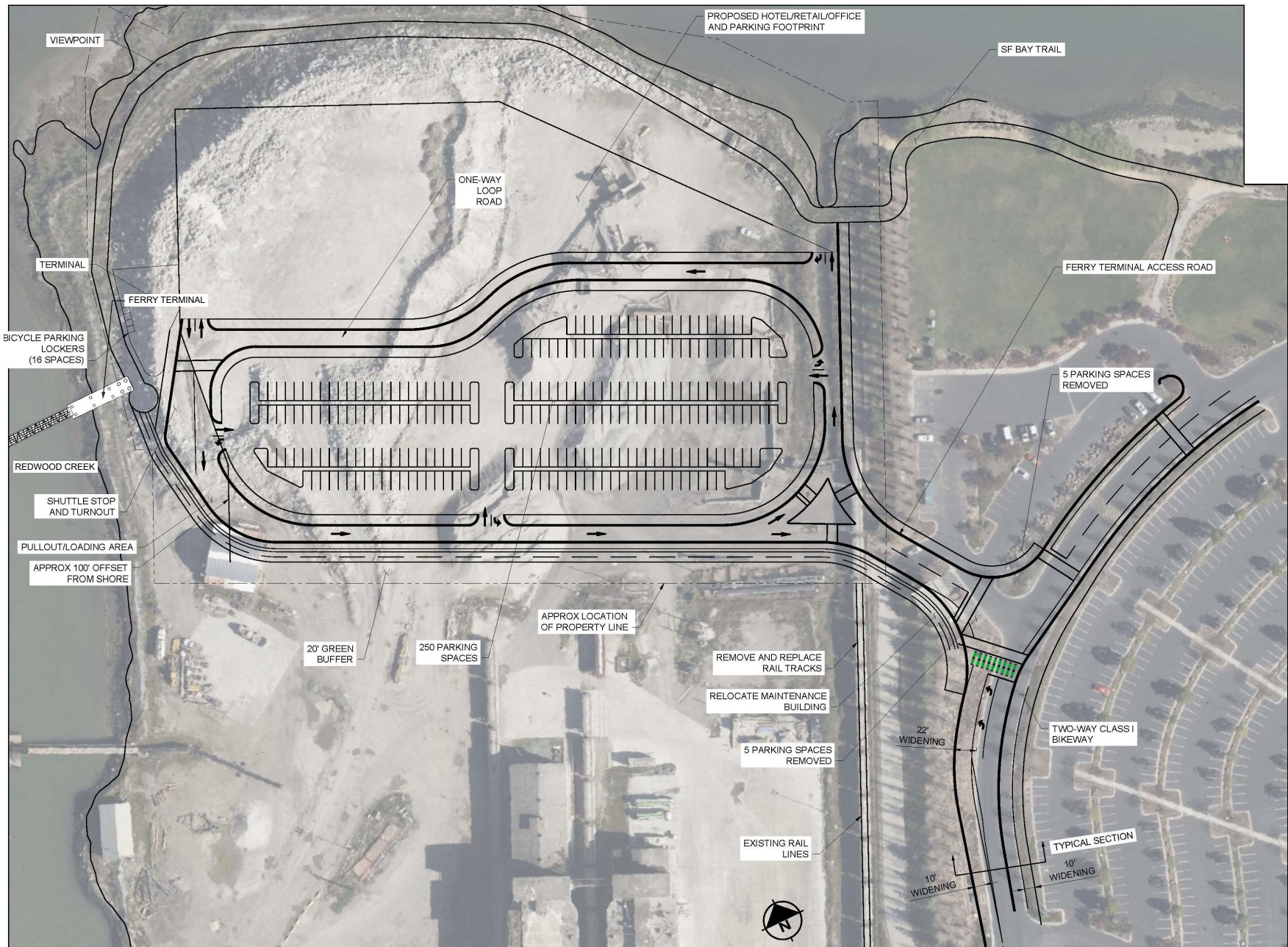
The proposed project would provide San Francisco Bay Ferry-operated passenger ferry service overseen by the Water Emergency Transportation Authority (WETA) at Redwood City with origin and destination points of San Francisco and Oakland. Ferry service would be during weekday morning and afternoon commute periods between the hours of approximately 6 am to 9 pm, utilizing diesel powered ferry vessels capable of carrying up to 320 passengers. As the ferry service matures, midday, evening, weekend, and special event service may be added. The service would be passenger only and would not transport vehicles. Transport of bicycles and small non-gas-powered mobility devices, such as skateboards and scooters, would be allowed pursuant to WETA/San Francisco Bay Ferry operating rules and U.S. Coast Guard (USCG) regulations.

The ferry terminal would consist of waterside and landside components, including a floating ferry dock with berths for two vessels, a gangway that connects the float and landside terminal facilities, and a pile-supported access pier with a security gate and canopy that provides access to the gangway. Other features include kiosks, a portable restroom facility, bicycle storage, a surface parking lot, and new utilities required to establish the proposed ferry service. The proposed project also includes widening the Seaport Boulevard loop road from the Pacific Shores Center entrance to the ferry terminal site to accommodate a bicycle trail and sidewalk, and extending the Bay Trail along the northern edge of the project area to the ferry terminal. The relocation of existing infrastructure (e.g., railroad spur, terminus of Frontage Road, lighting and utilities, and a maintenance building) and modifications to an existing public parking lot would be required to accommodate the access improvements. The site elevation of the nine acre terminal site would be raised to accommodate sea level rise.

The proposed project would include a zone change through the City of Redwood City (City) to change the zoning classification of the project site from General Industrial (GI) to General Commercial (CG). This would allow for the construction of an up to three-story full-service hotel (with a maximum of 180,000 square feet that may include 100 to 200 rooms, and related services such as bar/restaurant, and conference/meeting rooms); up to 20,000 square feet of restaurant uses separate from the hotel; a standalone office space (up to 10,000 square feet); and a permanent restroom facility at the ferry terminal. Additional on-site parking would be provided to accommodate the visitor-serving uses, which could include parking on the ground floor of the hotel and additional surface parking. The precise number of spaces and location required would be determined at the time specific development is proposed.

The proposed project also includes an amendment to the Bay Conservation and Development Commission (BCDC)'s San Francisco Bay Area Seaport Plan to allow visitor-serving amenities at the project site consistent with the Port's 2020 Vision Plan. Additionally, the proposed project includes an amendment to the San Francisco Vessel Mutual Assistance Plan (SF-VMAP) to incorporate the Redwood City ferry service and vessels. Figure 2 shows the project site and surroundings and Figure 3 provides a site plan of the proposed project.





### **1.2.1 Ferry Terminal Components**

The ferry terminal would have waterside components consisting of berths for two ferry vessels at a pile-supported floating dock with ramps and a gangway to a pile-supported access pier with a landside security gate, electric utilities for boarding ramps, shore power, and lighting. The landside components would consist of a parking lot with transit stops, roadway improvements, bicycle/pedestrian network connections, secure bicycle parking, and utilities serving the ferry terminal site. An interim portable restroom facility would be provided by the Port. These components are described in greater detail below. A detailed site plan for the project site can be found in Chapter 2 of the Draft Environmental Impact Report.

#### **1.2.1.1 Waterside Facilities**

The waterside components would include a steel floating platform (float) with berths for two ferry vessels from which passengers can board or disembark from the ferry. As shown on Figures 2 and 3, the float would be located on the western shore of the project site, extending into Redwood Creek. The float would act as the landing for vessels servicing the terminal and would provide access for passengers. The platform would allow the berthing of two ferries at the same time, and would also allow for either side of the float to be used for boarding.

The float would be moored in place by six steel guide piles that would support the float and provide navigation aid for landing vessels. The top elevation of the guide piles would account for sea level rise. The guide piles would be approximately 36 inches in diameter and 120 feet long. Two of the guide piles with floating donut fenders would be located at the offshore end of the float. The donut fenders would protect the corners of the float and provide a pivot point for vessels entering and leaving the berth.

The dimensions of the float would be consistent with recommended WETA specifications, which are currently 42 feet by 135 feet (5,670 square feet). WETA's ferry terminal standard specification recommendations are in the process of being updated to include space for the possible future installation of electric vessel charging infrastructure, in the event the technology evolves and becomes commercially available. It is currently not feasible to operate electric powered ferry vessels on the proposed Redwood City routes. This is due to the lack of available electric vessels which have the range to serve the required route length at the desired speed. However, the float dimensions would conform with the updated recommendations, which would include providing compartments in the float for future power electronics and equipment. This includes space to accommodate electric vessel charging infrastructure and an on-site battery energy storage system to increase useable storage volume and supplement the electric power grid should electric vessels be used for the Redwood City routes in the future. To account for a potential increase in the dimensions of the float, for purposes of this analysis, the float is assumed to be 45 feet by 135 feet (6,075 square feet.)

The length of the float would accommodate the boarding ramp system with two high ramps and one low ramp, and deck space for workers. The boarding ramp configuration would allow for the full range of San Francisco Bay Ferry vessels to land at the float and would comply with Americans with Disabilities Act (ADA)

requirements. The adjustable high boarding ramps would be located fore and aft (front and rear) for high freeboard vessels. The ramps would be spaced 50 feet apart and line up with the spacing of the fore and aft doors on San Francisco Bay Ferry vessels. The low ramp would allow vessels that may have low freeboards to use the float.

Walking platforms on the float and an ADA-compliant gangway would provide passenger access to a pile-supported access pier. The aluminum gangway would be up to 120 feet in length and 10 feet in width between handrails to accommodate two rows of passengers and have a light transmitting surface. The final width would be based on expected passenger loading operations and would account for additional room needed for passengers boarding with bicycles. The covered pile-supported access pier would be approximately 50 feet in length and 12 feet in width and would be fixed to the land, providing access from the landside terminal entrance to the gangway. The final length would be determined during final design based on the site elevation increase and placement of the float. The access pier would be supported by four to ten steel or precast concrete piles with cap beams that are approximately 24- to 36-inches in diameter. The access pier would have a deck elevation similar to the landside elevation and would take sea level rise into account. The access pier would have a security gate that is landside of the gangway connection and would include a canopy or other weather protection for queuing passengers. The ferry terminal facilities would use non-reflective building materials such as wood, cement, concrete, non-polished metal, and semi-transparent aluminum for the gangway.

The length of the pile-supported access pier and gangway would be based on final engineering and design considerations relative to maximum slope necessary to reach the lowest observed water elevation and compliance with ADA requirements without encroachment of the ferry dock into the turning basin. The gangway slope would vary depending on the tide levels during passenger loading/unloading, whereby the slope would be greatest during low tides and less when tides are higher. The ADA requires a maximum ramp slope of 1:12.<sup>1</sup> Design considerations that would provide for accessibility during the lowest tidal events include sloping the access pier slightly lower at the connection to the gangway so the top of the gangway is lower than the landside elevation or lengthening the gangway by adjusting the length of the access pier or location of the dock. Further, San Francisco Bay Ferry crew members would be on site at all times when the gangway is in use to provide passenger assistance, including any embarking or disembarking at low tides when the gangway slope would be greatest.

#### **1.2.1.2 Landside Facilities**

The landside components would include a parking lot with 250 spaces for ferry users, transit stops for shuttle services to the project site that would be established, and ride share and general public passenger drop-offs and pick-ups. A one-way loop access road for vehicles would extend around the perimeter of the parking lot. A Class I bicycle trail would be located on the southern side that connects from Seaport Boulevard to the ferry terminal. The parking lot would meet state and City electric vehicle (EV) requirements, the City's landscaping

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<sup>1</sup> The U. S. Access Board, which is a federal agency that promotes accessibility for people with disabilities, is developing accessibility guidelines for passenger vessels under the ADA. While not yet finalized, the Section V410 of the draft guidelines identifies that gangway runs shall have a running slope not steeper than 1:12.

and drainage requirements, and ADA requirements that include the size, location, and number of parking spaces and accessible route of travel to the terminal. The transit stops and drop-off area would be on the western edge of the project site, closest to the terminal. Additionally, there would be secure parking lockers for bicycle/micromobility devices (such as scooters) and ferry information displays near the drop-off area and terminal boarding area. An interim portable restroom facility would be provided for ferry passengers near the terminal boarding area. An off-street paved bicycle trail that is separated from vehicle traffic (Class I bicycle trail) and sidewalk would be located on the southern side that connects from Seaport Boulevard to the ferry terminal. Additional discussion of site access and the extension of the Bay Trail is provided in Sections 1.2.2.3 and 1.2.2.4 below, respectively. An approximately 20-foot landscaped buffer with a security fence would be established at the southern site boundary to provide a visual and physical buffer that prevents the public from entering the Port's restricted industrial areas.

### **1.2.1.3 Utilities**

The only utility connections at the project site are a connection to electrical power at the CEMEX marine terminal to run security lights and a fiber connection to the Port office to run security cameras. These connections would be abandoned and new connections to the existing utility network would be required to serve landside and waterside elements, including electrical, communication, and water utilities. Electric utilities would be needed to operate the adjustable boarding ramp lift system, lighting, and vessel lay berth shore power. Lighting would be provided on the access pier, gangway and float, including rail lighting along the gangway and float walkway system. Lighting would also be provided for the passenger waiting area and the parking lot. Potable water is needed for hose bibs on the float and a fire water system would be established, consistent with Redwood City Fire Department requirements. Communication utilities would be provided to operate the security system, public address system, and Clipper card readers. The interim portable restroom facility would be self-contained and would not be connected to the municipal sanitary sewer system. Freshwater and electricity for the restroom would be provided by connections to the new site utilities. New permanent stormwater facilities would be installed to collect stormwater and provide treatment in compliance with State, county, and City requirements. The interim portable restroom facility would be replaced by a permanent facility when a connection to the municipal sanitary sewer system is established at the project site for future visitor-serving uses.

### **1.2.1.4 Access/Connectivity**

The project site would be accessed from the Seaport Boulevard loop road. While access would be available from either direction from the loop road, the western leg provides the most direct access and would be most heavily used. Vehicles would travel north on Seaport Boulevard and onto the Seaport Boulevard loop road at the entrance to the Pacific Shores Center. Vehicles would then travel north along the western leg of the Seaport Boulevard loop road and turn left onto the new access road into the project site. The access road would have one lane in either direction for vehicles entering and exiting the project site. The intersection of the access road and Seaport Boulevard would be controlled by an all-way stop. A left turn pocket on Seaport Boulevard would be provided for vehicles turning left into the project site. Vehicles exiting the project site could turn left or right

onto Seaport Boulevard, but most vehicles would turn right to exit the Pacific Shores Center. Marked crosswalks and sidewalks would be provided and a bicycle crossing would be at the southern side of the access road.

The new site access road from Seaport Boulevard would be south of the waterfront park's western public parking lot. One of the public parking lot's existing driveways and approximately five parking spaces would be eliminated to accommodate the new access road. The remaining driveway and approximately 65 parking spaces would remain unmodified. There would be no connecting access between the western public parking lot and the new access road. There is also a cinderblock maintenance building with five parking spaces used by the Pacific Shores Center that is located southwest of the western public parking lot that would be removed to accommodate the project site access road. The building is approximately 1,000 square feet and 15 feet in height.

Additional roadway modifications include the widening of the western leg of the Seaport Boulevard loop road by approximately 10 to 13 feet on both sides from the entrance to the Pacific Shores Center to just north of the entrance to the project site. The widening would accommodate a Class I bicycle trail and an ADA-compliant sidewalk. The new Class I bicycle trail would be a two-way bikeway/multiuse path east of Seaport Boulevard that is approximately 13 feet in width and separated from the roadway by a raised curb, bollards, or other buffer. The sidewalk would be on the eastern edge of the bicycle trail and approximately 10 feet in width. The bicycle trail would extend from the entrance of the Pacific Shores Center to a marked crosswalk at the entrance to the project site on the southern side of the access roadway. After crossing into the project site, it would then extend along the southern boundary and turn north along the western site boundary until it reaches the ferry terminal.

The sidewalk would follow a similar route, but it would extend farther north on the Seaport Boulevard loop road past the project site access road to the western public parking lot entrance to the north. It would also extend along the northern side of the access road and the eastern boundary of the project site where it would connect with the Bay Trail extension discussed below. The bicycle trail and sidewalk would meet Bay Trail requirements and would connect the project site and waterfront park to the existing segment of the Bay Trail on Seaport Boulevard to the south. The existing portion of the Bay Trail will connect to the future bike and pedestrian path at the US 101/SR 84 interchange and Broadway and Veterans Boulevard.

The intersection at the entrance to the Pacific Shores Center would be modified to accommodate the proposed sidewalk and bicycle trail and establish a safe connection to the existing trail to the south. To maintain the existing landscaped entry design and signage at the Pacific Shores Center entrance, the roadway would be shifted to the southwest and the proposed bicycle trail and sidewalk would be on the northeast in the footprint of the existing roadway. Approximately 200 feet of roadway to the east would also be shifted to the southwest. This would require removal of the existing landscape buffer and approximately seven parking spaces to the southwest. A new landscape buffer would be provided on both sides of the roadway. The intersection improvements would accommodate future signalization to improve traffic flow. This analysis assumes installation of the traffic signal in 2039 and operation by 2040.

### **1.2.1.5 Bay Trail**

There is an existing segment of the Bay Trail south of the Pacific Shores Center to the east of Seaport Boulevard, along the eastern boundary of the Pacific Shores Center, and on the water's edge in the waterfront park. The trail in the waterfront park terminates approximately 350 feet east of the project site where it connects to the western public parking lot and approximately 300 feet of unpaved trail that ends at a security fence separating the Pacific Shores Center from the Port's restricted industrial areas. Under the proposed project, the unpaved trail would be paved and extended approximately 70 feet to the project site boundary near the location of the existing tide gate. The newly paved trail in the waterfront park would connect to the proposed Bay Trail within the project site. The proposed Bay Trail segment would continue along the water's edge to the ferry terminal. At the ferry terminal, the proposed Bay Trail segment would connect with the proposed Class I bicycle trail and sidewalk that would extend along the southern boundary of the project site. Although not proposed as part of the Bay Trail, the proposed Class I bicycle trail and sidewalk along the southern boundary of the site and the eastern edge of the Seaport Boulevard Corridor would conform to Bay Trail standards and would provide additional connectivity between the proposed Bay Trail terminus on the project site and the Bay Trail segment along Seaport Boulevard south of the Pacific Shores Center. The existing security fence would be reconfigured to allow trail users to access the project site and prevent users from entering the Port's restricted industrial areas south of the project site. The trail on the water's edge and the Class I bicycle trail would be a new segment of the Bay Trail.

### **1.2.1.6 Future Visitor-Serving Uses**

Consistent with the Port's 2020 Vision Plan, the Port is proposing a zone change to allow for future uses at the project site to expand waterfront access to the community and increase visitor-serving amenities. The proposed zone change would include the entire 9.2-acre project site and would allow a hotel and associated restaurant and associated retail and meeting/event facilities, and a standalone restaurant and small office that are separate from the hotel. The proposed zone change would change the project site zoning from the existing GI classification to CG (General Commercial). The CG classification would permit a hotel, an administrative or professional office of less than 10,000 square feet, sales of merchandise, and commercial passenger terminal facilities. Restaurants and bars would be permitted as a conditional use. The CG classification would limit lot coverage to 60 percent and while it would allow a building height of up to 75 feet (e.g., five to seven stories), the building height at the project site would be limited to three stories (e.g., approximately 45 feet) in compliance with the project site's General Plan designation of M (Marina) which is not proposed to be amended.

The future visitor-serving uses would be located in the northern side of the project site, along Westpoint Slough. The uses would include hotel, restaurant, and limited office; however, the precise mix of uses and square footage is unknown and would be developed during future site planning. The analysis of potential physical environmental impacts is based on reasonable assumptions about the maximum amount of future development that could occur based on site constraints and consistency with the Port's 2020 Vision Plan, existing General Plan land use designation, and the proposed zoning classification. These assumptions are identified below.

The primary visitor-serving use would be a full-service hotel with a footprint of up to approximately 60,000 square feet with up to three stories and a maximum of 180,000 square feet of building area. The maximum 180,000 square feet is assumed to include integrated ground-floor parking, approximately 100 to 200 rooms, and related services that may include a bar/restaurant, conference/meeting rooms, a fitness center and pool, and retail uses. The project site would also accommodate up to 20,000 square feet of restaurant uses and up to 10,000 square feet of office space that are assumed to be single-story buildings. New utilities and utility connections would be required for all new development on-site. The interim portable restroom facility at the ferry terminal would be replaced by a permanent facility when a sewer line is established at the project site for future visitor-serving uses. The permanent restroom is assumed to be 350 square feet. The buildings would be located a minimum of 100 feet from the water's edge.

Additional parking on-site would be provided to accommodate the visitor-serving uses. The precise number of spaces and location required would be determined at the time specific development is proposed. This analysis assumes that the parking for the visitor-serving uses would be provided on the ground floor of the hotel, but it may also include some surface parking. The number of spaces provided would be consistent with City parking requirements. It is assumed that a portion of the parking would be shared parking between the ferry terminal and other uses. Long-term (secured) and short-term (unsecured) bicycle parking would also be provided in compliance with requirements.

## **1.2.2 Project Construction**

### **1.2.2.1 Construction Sequence**

Construction of all the project elements would be a duration of approximately four years commencing in mid-2026. Construction would begin with the raising of the site elevation of the 9.2-acre project site from approximately 10-feet NAVD to 17-feet NAVD. This would take approximately seven to nine months. The construction of the ferry terminal and parking lot, Bay Trail extension, the widening of the Seaport Boulevard corridor with a bicycle trail and sidewalk, other access improvements (including constructing the project site entrance, construction of the relocated railroad track, and vacation of the Frontage Road segment), and demolition and relocation of the existing maintenance building would follow the raising of the site elevation. Construction of these elements is expected to last for approximately 15 months. Construction of the ferry terminal, which is estimated to take four months, is expected to overlap with construction of the access improvements. Demolition and reconstruction of the maintenance building and railroad track may also occur simultaneously with construction of the ferry terminal and access improvements. The timing and duration for construction of the visitor-serving uses would be determined when the specific development is proposed; however, this analysis conservatively assumes that the construction of the visitor-serving uses would begin immediately following construction of the ferry terminal and last for a period of approximately 24 months.

### **1.2.2.2 Construction Activities**

Project construction would begin with raising the site elevation of the 9.2-acre project site to 17-feet NAVD. An estimated 124,200 cubic yards of fill would be trucked to the site from up to approximately 20 miles off-

site to build up the elevation. This would result in approximately 100 truck trips per day over an estimated nine months. After placement of the fill, the raised soils would be compacted and prepared for project construction and the slope along the boundaries of the site would be stabilized. Slope stabilization would comply with the City's building code and engineering standards and recommendations contained the project-specific geotechnical investigation. The stabilization method used would vary depending on the slope angle that is established. A slope angle of 2:1 (horizontal distance that is twice the vertical distance) could be stabilized with placement of riprap along the bottom of the slope.

Construction activities associated with the ferry terminal landside improvements would include the demolition and relocation of the Pacific Shores Center maintenance building, demolition of the portion of the public parking lot within the project footprint, removal of the railroad tracks east of the project site, site preparation, installation of collection and conveyance systems for water and stormwater and distribution systems for electricity, site paving, painting/stripping, installation of the passenger access pier with cover, installation of drought tolerant landscaping, and installation of other support features and infrastructure including a security gate, EV charging facilities, bicycle storage, parking lot lighting, and signage.

The improvements in the Seaport Boulevard Corridor would include demolition of existing pavement, site clearing on both sides of the roadway, relocation or protection in place of existing utilities, relocation of street lighting, site preparation, paving, striping, and the installation of trail and sidewalk lighting and landscaping. Temporary lane closures on Seaport Boulevard would be required during the construction period. This would require the use of flaggers (flag persons) to control traffic movement during periods when only one lane is in operation or would require diverting traffic to the eastern leg of the loop road to avoid areas with lane closures.

New railroad tracks would be constructed in the vacated portion of Frontage Road south of the project site to replace the tracks that would be removed, and the existing unpaved portion of the Bay Trail would be extended, graded, and paved to connect to the Bay Trail within the project site.

Construction of waterside elements would involve a combination of land-based and marine-based activities and equipment. This would include the installation of a new covered pile-supported access pier with four to ten steel or precast concrete piles with cap beams that are approximately 24- to 36-inches in diameter. The precise number of and diameter of the piles would be determined during final design following completion of the full geotechnical assessment. The project would also include the installation of a new aluminum 10-foot-wide by up to 120-foot-long gangway leading from the pier to a new 135-foot-long by 45-foot-wide float. A minimum of four 36-inch steel guide piles would be installed to moor the steel float in place. To achieve safer berthing, two additional 36-inch steel piles would be installed with donut fenders.

For some waterside elements, tug supported barges would be used to transport and stage equipment and materials. The ferry terminal would include waterside construction for in-water installation of the pilings and float and overwater work to install the float, ramps, and utilities. Waterside construction work would follow industry standard practices and federal and state agency permitting requirements. This would include permitting

under Section 401 of the Clean Water Act by the U.S. Army Corps of Engineers and a Clean Water Act Section 401 Water Quality Certification issued by the San Francisco Bay Regional Water Quality Control Board.

It is anticipated that steel piles for the float guide piles would be installed with a vibratory hammer (e.g., vibrating the pile into sediment). However, in the event there is resistance to pile installation with a vibratory hammer, an impact hammer (hammering in of the pile) would be used to achieve the required depth. As noted above, depending on final design, the access piles would be either steel or precast concrete. The access pier piles would be installed with either an impact hammer (for precast concrete piles) or a vibratory hammer (for steel piles). The total estimated number of piles for the float and access pier is 10 to 16 as shown in Table 1, and the amount of new water surface coverage is approximately 7,000 square feet. Construction of the float and gangway would occur offsite and would be brought into the site by barge for installation.

**Table 1. Pile Installation of Float and Access Pier**

| <b>New Structure</b>                          | <b>Pile Size &amp; Type</b>                          | <b>No.</b> | <b>Location</b>          | <b>Hammer type</b>                   |
|-----------------------------------------------|------------------------------------------------------|------------|--------------------------|--------------------------------------|
| Float guide piles<br>(two with donut fenders) | 36-inch steel pipe                                   | 6          | Terminal<br>Float, water | Impact hammer or<br>vibratory hammer |
| Access pier and pier<br>foundation            | 24- to 36-inch<br>precast concrete<br>or steel piles | 4 – 10     | Pier, water              | Impact hammer or<br>vibratory hammer |

Maintenance dredging of the Redwood Creek U.S. Army Corps of Engineers (USACE) channel would continue to occur under existing USACE permits to an authorized depth of -30 feet MLLW and no additional dredging of the USACE channel would be required for the proposed project. However, a small amount of dredging from the channel to the ferry terminal and at the ferry berths would be required during construction of the ferry terminal. The amount of dredging is estimated at up to 11,500 cubic yards to approximately -12 to -15 feet MLLW. Dredge material would be removed by barges and taken to an offsite disposal facility for beneficial reuse.

Construction of the visitor-serving amenities would include many of the aforementioned landside construction activities, including site preparation, installation of utilities, site paving, painting/stripping, and installation of drought tolerant landscaping and lighting. Additional activities would include installation of wastewater collection and conveyance systems and connection to the existing sanitary sewer system, establishing a driveway connection with the ferry terminal access roadway, removal of the existing Shell Unloading Wharf parallel to the shore along Westpoint Slough, and building construction.

Federal and state permits and regulations would be followed during project construction activities to protect special-status species and their aquatic habitats as required by permits and regulations. This would include, but not be limited to, the stormwater pollution prevention plan and erosion and sediment control plan required under the National Pollutant Discharge Elimination System program, an oil spill prevention and control plan, and a construction debris management plan. The oil spill prevention and control plan would specify restrictions and procedures for fuel storage location, fueling activities, and equipment maintenance locating fueling stations

with the intent of protecting wetlands and other sensitive habitats. Additional information on required permits and regulations to which the proposed project would adhere can be found throughout Chapter 3 of the EIR, particularly Section 3.3, Biological Resources, and Section 3.9, Hydrology and Water Quality.

Hauling would occur in compliance with Article VI, Truck Traffic Routes, of the Redwood City Municipal Code. Consistent with Article VI, trucks entering or departing the City would use a designated truck traffic route, including U.S. Route 101, and access the project site using the nearest streets from the designated truck route (e.g., East Bayshore Road and Seaport Boulevard). During raising of the site elevation and construction of the ferry terminal, truck traffic would primarily use Frontage Road to access the project site, except as needed for the construction activities associated with the widening of the Seaport Boulevard loop road. While construction of the ferry terminal at the project site would largely be completed following the vacation of a portion of Frontage Road and the relocation of the railroad tracks, any truck traffic occurring once the vacated portion of Frontage Road is closed would use the Seaport Boulevard loop road to access the project site. During construction of the visitor-serving uses, trucks would need to use the western leg of Seaport Boulevard loop road to access the project site. This would also be the most direct vehicle route for ferry terminal visitors. Ferry visitors could also access the ferry terminal from the eastern leg of the loop road, subject to coordination with the Pacific Shores Center. Information on the types and numbers of construction equipment is presented in Sections 3.2, Air Quality, and 3.10, Noise and Vibration, of the EIR.

Construction activities would typically occur during daytime hours, between 7 am and 7 pm, Monday through Friday, and between 8 am and 5 pm on Saturdays. Should nighttime construction activities be necessary (e.g., to perform utility connections), on-site lighting would be required. The lighting would include floodlights focused on the work area and not onto adjoining properties.

### **1.2.3 Project Operations**

#### **1.2.3.1 Ferry Operations**

San Francisco Bay Ferry's ferry fleet is composed primarily of diesel-powered catamaran-style ships that accommodate between 225 and 445 passengers. The ferry fleet uses renewable diesel fuel. Newer vessels are compliant with U.S. Environmental Protection Agency's (USEPA) Tier 4 emission standards, which require the cleanest combustion engines and are equipped with diesel particulate filters and older vessels are being upgraded under WETA's Commercial Harbor Craft Alternative Control of Emissions Plan to achieve Tier 4 standards with diesel particulate filters where feasible (WETA 2024a). The vessel type proposed for the Redwood City service connecting to San Francisco and/or connecting to Oakland is a 320-passenger capacity vessel. The commute time (excluding passenger loading/unloading time) would be 71 minutes for the Oakland to Redwood City route and 61 minutes for the San Francisco to Redwood City route. The initial service is proposed as a commute-period service, providing three to four trips during both am and pm peak periods on weekdays. This service would operate approximately 6 am to 10:30 am in the mornings and approximately 4 pm to 9:30 pm in the evenings. Depending on demand, midday service to either San Francisco or Oakland, and weekend service to San Francisco may be added. Future plans might also involve extending the service to

include special event services to San Francisco on the weekends, similar to what San Francisco Bay Ferry offers on existing services.

The proposed project evaluated in this report assumes that full buildout service would be implemented and include all day service to San Francisco and to Oakland that has a higher frequency of service during morning and evening peak periods on weekdays, and weekend day and up to 15 days of special event service for the San Francisco route. To address possible future increases in service, the analysis also assumes an up to 20 percent increase in services for weekdays and weekends. Actual service would depend on demand and would be subject to San Francisco Bay Ferry's standard operating practices. The full buildout service would be phased-in over time to match demand and available operating resources.

Ferries would idle at the berth during 10-minute embarking/disembarking. Vessels would dock overnight and on weekends at the WETA Central Bay Operations and Maintenance Facility (CBOMF) in Alameda and may occasionally be berthed overnight or on weekends at the Redwood City terminal.

Vessels would typically be traveling at 35 knots while transiting the Bay and would slow to 7 knots within Redwood Creek Channel to protect both non-motorized water users as well as sea and land species and their habitat. To further minimize the wake that could affect the adjacent marsh islands, the transition in vessel speed would occur when the ferry is offshore of Bair Island's northeastern point.<sup>2</sup> Specifically, this transition would occur at the position of USCG channel visual aids referred to as Redwood Creek Lights 5 and 6. On Redwood Creek, wake enforcement would be the responsibility of the USCG in conjunction with the Redwood City Police Department.

#### **1.2.3.2 Oakland Service**

The Oakland route would be a round-trip service between the Jack London Square Ferry Terminal and Redwood City, with an approximate one-way running time of 71 minutes. The service would depart Oakland and travel westbound out of the estuary before heading south to Redwood City. The route would travel through established navigational channels in the inner San Francisco Bay and would turn southwest to enter the navigational channel in Redwood Creek. The route would be reversed in the opposite direction, also traveling through the established navigational channels. Two ferry boats would be deployed for this service. Figure 1 illustrates this route.

#### **1.2.3.3 San Francisco Service**

The San Francisco route would be a round-trip service between the San Francisco Ferry Terminal and Redwood City. The one-way running time from the San Francisco Ferry Terminal to the Redwood City Ferry Terminal would be approximately 61 minutes. After departing San Francisco, the route would travel through established navigational channels in the inner San Francisco Bay and would turn southwest to enter the navigational channel

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<sup>2</sup> The transition point at Redwood Creek Lights 5 and 6 would be where inbound vessels slow in speed from 35 knots to 7 knots and outbound vessels would increase in speed from 7 knots to 35 knots.

in Redwood Creek. The route would be reversed in the opposite direction, also traveling through the established navigational channels. Two ferry boats would be deployed for this service. Figure 1 illustrates this route.

#### **1.2.3.4 Zero Emission Operations**

To comply with California Air Resources Board requirements and to be a leader in the sector, WETA is preparing for a phased transition of its ferry fleet from diesel operated ferries to zero-emission vessels (ZEV). The transition will begin with converting to electric vessels on the shorter and medium routes. For longer routes, such as the proposed Redwood City service, electric vessels are currently infeasible, and the possible use of alternative fuels is being explored. For purposes of this analysis, because there is no feasible ZEV technology currently available, the use of diesel ferries is assumed for ferry operations. However, the ferry terminal design would comply with WETA standard design recommendations for accommodating electric vessels in the future to assist in the transition should the technology become available.

#### **1.2.3.5 Maintenance**

Ferry terminal maintenance activities would include security, landscaping, general maintenance, portable toilet cleaning and maintenance, and electricity, water, telecommunications, and trash service. Maintenance dredging at the ferry terminal, if required, would occur every 2-10 years depending on the specific needs. This would occur independent of maintenance dredging of the Redwood Creek USACE channel that is executed under the existing USACE permit. WETA is responsible for waterside facilities at terminals, such as the maintenance and rehabilitation of floats. The Port is responsible for landside maintenance. Maintenance of the ferry vessels would occur offsite at the WETA CBOMF in Alameda.

#### **1.2.3.6 Visitor-Serving Uses**

The operation of visitor-serving uses would result in up to approximately 400 new employment opportunities associated with the hotel and related facilities, restaurant, and the limited office uses. The hotel facility would be open 24 hours per day, 365 days per year. The restaurant, retail, and the limited office space uses would have more limited hours than the hotel services.

## Section 2. Methods

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### 2.1 Background Review

Prior to conducting a site visit, H. T. Harvey and Associates ecologists reviewed background information on the sensitive biological resources potentially present in and immediately adjacent to the project area. The information reviewed included records from the California Natural Diversity Database (CNDDB 2025) and the California Native Plant Society's (CNPS's) Online Rare Plant Inventory (2025), focused on the *Redwood Point, California* USGS 7.5-minute quadrangle (which includes the terminal project area) and the eight quadrangles surrounding it: *Mountain View, Palo Alto, Newark, San Leandro, Hayward, Hunters Point, San Mateo, and Woodside*. The searches focused on the distribution and habitats of vascular plants designated as California Rare Plant Rank (CRPR) 1-4 that occur in any of the USGS quadrangles listed above.

We reviewed CNDDB records for special-status animals and natural communities of concern in the vicinity of the terminal project area, defined in this report as the area within a 2-mile (mi) radius of the terminal project area. Additionally, the Natural Resources Conservation Service (NRCS) Web Soil Survey was used to identify soils that underlay the terminal project area (NRCS 2025), and the U.S. Fish and Wildlife Service's (USFWS's) National Wetland Inventory (NWI) Wetlands Mapper was consulted to review pre-existing mapping of aquatic features, including wetlands, streams, and sloughs, that may be present in the project area (NWI 2025). Historical aerial imagery of the project area obtained from Google Earth Pro (Google LLC 2025) was also evaluated. Other information reviewed included various technical publications available through the USFWS, California Department of Fish and Wildlife (CDFW), and other sources (identified in Section 7, References).

We also reviewed the Redwood City Focused General Plan Update Draft EIR and Appendices (City of Redwood City 2022a). The terminal project area is part of the Redwood City General Plan area, and development in the terminal project area is therefore subject to requirements of the General Plan and its EIR, as appropriate. We also reviewed the Port of Redwood City Wharves 1 and 2 Redevelopment Project Draft and Final EIRs (Port of Redwood City 2010), Port of Redwood City Wharves 3 and 4 Fender Replacement Project IS-MND (Port of Redwood City 2016), CEMEX Ready-Mix Concrete Plant Project IS/MND (Port of Redwood City 2021), Pacific Shores Center Project Draft and Final EIR (City of Redwood City 1994a, City of Redwood City 1995), and Pacific Shores Center Project Appendices to Draft EIR (City of Redwood City 1994b) located directly adjacent to and including the terminal project area; the 505 E. Bayshore Road Project Draft EIR (City of Redwood City 2022b), located upstream from the project site on an unnamed tidal slough; and the Downtown San Francisco Ferry Terminal Expansion Project Draft and Final EIS/EIR (WETA 2013, WETA 2014a), Richmond Ferry Terminal Project Draft IS/MND (WETA 2014b), Alameda Main Street Ferry Terminal Refurbishment Project Final IS/MND (WETA 2023a), and the Vallejo Ferry Terminal Reconfiguration Project Draft IS/MND (WETA 2024b) to provide more context for this analysis.

## 2.2 Site Visits

H. T. Harvey & Associates wildlife ecologist Benjamin Pearl, M.S. and plant ecologist Katie Tyree, B.A., surveyed the terminal project area on June 20, 2024. The purpose of this initial survey was to (1) assess existing biotic habitats and plant and animal communities in the terminal project area, (2) assess the site for its potential to support special-status species and their habitats, and (3) identify potential jurisdictional habitats (such as Waters of the U.S./State), although a formal wetland delineation was not conducted at that time.

H. T. Harvey & Associates mapped biotic habitats within the terminal project area using a combination of field observations (recorded via the Apple iPad GIS Kit Pro application) and aerial imagery signatures. Habitat types were distinguished using natural community descriptions discussed in Holland (1986), Sawyer et al. (2009), and CDFW's Vegetation Classification and Mapping (CDFW 2025). Plant species within each habitat were identified using Baldwin et al. (2012). Habitat acreages were calculated using geographic information systems (GIS) and aerial imagery interpretation.

Follow-up site visits were conducted by K. Tyree on July 30, 2024 and August 28, 2024. The purpose of these follow-up site visits was to assess the potential presence of California seablite (*Suaeda californica*), a federally endangered plant species, during the time that it was expected to be in bloom.

## Section 3. Regulatory Setting

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Biological resources within the project area are regulated by a number of federal, state, and local laws and ordinances, as described below.

### 3.1 Federal Regulations

#### 3.1.1 Clean Water Act

The Clean Water Act (CWA) functions to maintain and restore the physical, chemical, and biological integrity of waters of the U.S., which include, but are not limited to, tributaries to traditionally navigable waters currently or historically used for interstate or foreign commerce, and adjacent wetlands. Historically, in non-tidal waters, USACE jurisdiction extends to the ordinary high water mark (OHWM), which is defined in Title 33, Code of Federal Regulations, Part 328.3. If there are wetlands adjacent to channelized features, the limits of USACE jurisdiction extend beyond the OHWM to the outer edges of the wetlands. Wetlands that are not adjacent to waters of the U.S. are termed “isolated wetlands” and, depending on the circumstances, may be subject to USACE jurisdiction. In tidal waters, USACE jurisdiction extends to the landward extent of vegetation associated with salt or brackish water or the high tide line. The high tide line is defined in 33 Code of Federal Regulations Part 328.3 as “the line of intersection of the land with the water’s surface at the maximum height reached by a rising tide.” The May 25, 2023 U.S. Supreme Court decision in *Sackett v. Environmental Protection Agency* limited the definition of waters of the U.S. by including only wetlands that have a continuous surface connection with traditional navigable waters or their tributaries. On August 29, 2023, the U.S. Environmental Protection Agency and USACE issued a final implementing rule to amend the definition of waters of the U.S. to conform with the *Sackett* decision, which was implemented in September 2023.

Construction activities that would dredge or place fill within jurisdictional waters are regulated by the USACE under Section 404 of the CWA. The dredging and/or placement of fill into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of Section 401 Water Quality Certification. The State Water Resources Control Board (SWRCB) is the state agency (together with the Regional Water Quality Control Boards [RWQCBs]) charged with implementing water quality certification in California.

Compensatory mitigation is required to offset unavoidable adverse impacts on aquatic resources regulated under Section 404 of the CWA that remain after all practicable and appropriate avoidance and minimization has been achieved. Methods for providing compensatory mitigation include restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or preservation in certain circumstances (USEPA 2025).

Project Applicability: The biological assessment of habitats identified potential waters of the U.S. on and adjacent to the terminal project area. Redwood Creek and Westpoint Slough, bordering the terminal project area, are considered waters of the U.S. In addition, the tidal channel and tidal salt marsh that have a continuous surface connection to the San Francisco Bay would be considered waters of the U.S. The proposed project would impact waters of the U.S., and therefore, a Section 404 permit from the USACE would be necessary for these activities.

### **3.1.2 Rivers and Harbors Act**

Section 10 of the Rivers and Harbors Act of 1899 prohibits the creation of any obstruction to the navigable capacity of waters of the U.S., including discharge of fill and the building of any wharfs, piers, jetties, and other structures without Congressional approval or authorization by the Chief of Engineers and Secretary of the Army (33 U.S.C. 403).

Navigable waters of the U.S., which are defined in 33 CFR, Part 329.4, include all waters subject to the ebb and flow of the tide, and/or those which are presently or have historically been used to transport commerce. The shoreward jurisdictional limit of tidal waters is further defined in 33 CFR, Part 329.12 as “the line on the shore reached by the plane of the mean (average) high water.” It is important to understand that the USACE does not regulate wetlands under Section 10, only the aquatic or open waters component of Bay habitat, and that there is overlap between Section 10 jurisdiction and Section 404 jurisdiction. According to 33 CFR, Part 329.9, a waterbody that was once navigable in its natural or improved state retains its character as “navigable in law” even though it is not presently used for commerce as a result of changed conditions and/or the presence of obstructions. Historical Section 10 waters may occur behind levees in areas that are not currently exposed to tidal or muted-tidal influence, and meet the following criteria: (1) the area is presently at or below the mean high water line; (2) the area was historically at or below mean high water in its “unobstructed, natural state”; and (3) there is no evidence that the area was ever above mean high water (USACE 2013).

As mentioned above, Section 404 of the CWA authorizes the USACE to issue permits to regulate the discharge of dredged or fill material into waters of the U.S. If a project also proposes to discharge dredged or fill material and/or introduce other potential obstructions in navigable waters of the U.S., a Letter of Permission authorizing these impacts must be obtained from the USACE under Section 10 of the Rivers and Harbors Act.

Project Applicability: Areas below the mean high water (MHW) elevation within the tidal channel on the eastern border of the terminal project area, Redwood Creek, and Westpoint Slough represent Section 10 waters. Additionally, tidal wetlands below the MHW elevation are also regulated under Section 10. Because construction would occur in Redwood Creek and Westpoint Slough, which are within Section 10 waters, a Letter of Permission from the USACE would be required (concurrently with the Section 404 permit).

### 3.1.3 Dredged Materials Management Office

In 1996, the USACE recorded a Memorandum of Understanding between USACE and the San Francisco Bay RWQCB, the California State Lands Commission, the U.S. Environmental Protection Agency, and the BCDC to establish the Dredged Materials Management Office (DMMO). This joint agency office was established to foster a comprehensive, consolidated approach to dredged materials management issues during permitting for dredging projects. The DMMO cooperatively reviews sediment quality sampling plans, analyzes the results of sediment quality sampling, and makes suitability determinations for material proposed for dredging or disposal in San Francisco Bay. The DMMO agencies also review permits for new navigational channel dredging, disposal of dredged material, and maintenance dredging under a separate permit from the DMMO agencies. The DMMO permit process for dredging activities includes application submittal and review. Once the permit is issued, the sediment must be characterized to obtain a suitability determination for disposal or beneficial reuse. Once the sediment is determined to be suitable, an episode approval is needed prior to proceeding with dredging activities (LTMS 2021).

Project Applicability: Because the project proposes initial/new and maintenance dredging associated with the new ferry terminal, it would be subject to permitting and associated requirements under the DMMO.

### 3.1.4 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects federally listed wildlife species from harm or *take*, which is broadly defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” *Take* can also include habitat modification or degradation that directly results in death or injury of a listed wildlife species. An activity can be defined as *take* even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under the FESA only if they occur on federal lands.

The USFWS and the National Marine Fisheries Service (NMFS) have jurisdiction over federally listed, threatened, and endangered species under FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under FESA, but may become listed in the near future and are often included in USFWS’s review of a project.

Project Applicability: No federally listed plant species occur on or near the project site, but several federally listed or candidate animal species could occur. No suitable nesting habitat for the federally endangered California Ridgway's rail (*Rallus obsoletus obsoletus*) or salt marsh harvest mouse (*Reithrodontomys raviventris*) is present in the project area, and what little vegetated tidal salt marsh is present is of very low quality for these species. Across Redwood Creek and Westpoint Slough, both Bair Island and Greco Island provide high-quality tidal marsh habitat, and both species occur there. Small numbers of California least terns (*Sternula antillarum browni*), which are federally listed as endangered, may forage over Redwood Creek and Westpoint Slough adjacent to the terminal project area, and larger numbers may forage over open bay waters along the ferry routes. The federally threatened western snowy plover (*Charadrius nivosus nivosus*) was known to nest on Middle

and Outer Bair Island before tidal marsh restoration eliminated the majority of suitable habitat. The western snowy plover may still nest or forage on Outer Bair Island in remnant salt panne and marsh-fronting oyster shell beaches. The monarch butterfly (*Danaus plexippus*), a federal candidate species, could possibly occur in the terminal project area as an occasional migrant, and adults may nectar at flowers in the terminal project area. However, no suitable hostplants (milkweeds [*Asclepias* spp.]) are present in the terminal project area, so this species does not breed there, and this species is not known or expected to form winter roost aggregations on or very near the terminal project area.

The federally threatened Central California Coast steelhead (*Oncorhynchus mykiss*) and southern green sturgeon (*Acipenser medirostris*), and the federally endangered longfin smelt (*Spirinchus thaleichthys*), occur in Bay waters and are expected to occur at least occasionally in Redwood Creek, Westpoint Slough, and open Bay in and adjacent to the project area. San Francisco Bay, Redwood Creek, and Westpoint Slough are located within designated critical habitat for the southern green sturgeon and Central California Coast steelhead.

The proposed project could result in take of federally listed species. During Section 404/Section 10 permitting, a Biological Assessment describing potential effects of the proposed project on listed species (consistent with the impact analysis in this Biological Resources Report) would be prepared for use by the USACE in consulting as necessary with the USFWS and NMFS regarding any such effects.

### **3.1.5 Magnuson-Stevens Fishery Conservation and Management Act**

The Magnuson-Stevens Fishery Conservation and Management Act governs all fishery management activities that occur in federal waters within the United States' 200-nautical-mile limit. The Act establishes eight Regional Fishery Management Councils responsible for the preparation of fishery management plans (FMPs) to achieve the optimum yield from U.S. fisheries in their regions. These councils, with assistance from the NMFS, establish Essential Fish Habitat (EFH) in FMPs for all managed species. Federal agencies that fund, permit, or implement activities that may adversely affect EFH are required to consult with the NMFS regarding potential adverse effects of their actions on EFH, and respond in writing to recommendations by the NMFS.

Project Applicability: Intertidal habitats within Redwood Creek and Westpoint Slough in and adjacent to the terminal project area up to the elevation of mean higher high water and open waters of the Bay along the ferry routes are considered to be EFH for a number of species that are federally managed under one or more of the following three FMPs:

- Coastal Pelagic Species FMP – northern anchovy (*Engraulis mordax*), Pacific sardine (*Sardinops sagax*), mackerel, squid
- Pacific Coast Groundfish FMP – various rockfish, soles, and sharks
- Pacific Coast Salmon FMP – Chinook salmon (*Oncorhynchus tshawytscha*)

FMP-managed fish species are expected to occur in Redwood Creek, Westpoint Slough, and the open bay. The terminal project area provides only a very small amount of low quality tidal salt marsh that is inaccessible to fish during most tides. However, tidal marsh habitat present in Bair Island and Greco Island provide nursery habitat for these species. Because the proposed project may impact EFH during the in-water work of the ferry terminal construction and daily ferry operations, consultation between the USACE and NMFS regarding potential project effects on EFH would occur concurrently with Section 7 consultation under FESA, as described above.

### **3.1.6 Federal Migratory Bird Treaty Act**

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. Section 703, prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The MBTA protects whole birds, parts of birds, and bird eggs and nests, and it prohibits the possession of all nests of protected bird species whether they are active or inactive. An *active* nest is defined as having eggs or young, as described by the USFWS in its June 14, 2018 memorandum “Destruction and Relocation of Migratory Bird Nest Contents”. Nest starts (nests that are under construction and do not yet contain eggs) and inactive nests are not protected from destruction.

Project Applicability: All native bird species that occur within the project area (see Table 2 in Section 5.2 below) are protected under the MBTA.

### **3.1.7 Marine Mammal Protection Act**

The Marine Mammal Protection Act (MMPA) prohibits the take of marine mammals, with certain exceptions, in waters under the jurisdiction of the U.S. or by citizens of the U.S. on the high seas, as well as the importation of marine mammals and marine mammal products into the U.S. Take is defined as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.” Harassment is defined as “any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild; or has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.”

Project Applicability. Pacific harbor seals (*Phoca vitulina richardsi*) and California sea lions (*Zalophus californianus*), which are protected under the MMPA, are known to occur in open bay waters in the vicinity of the terminal project area and ferry routes. Two of six recognized Pacific harbor seal haul-out and pupping sites in the South San Francisco Bay are located at Corkscrew Slough and Outer Bair Island approximately 0.8 and 1.4 miles, respectively, north of the terminal project area (Fox 2008), and harbor seals must swim through either Redwood Creek or Steinberger Slough, located on the north side of Bair Island, to reach Corkscrew Slough. Pacific harbor seals may also occasionally forage in Westpoint Slough adjacent to the terminal project area. California sea lions do not breed in San Francisco Bay, but occasionally occur as common residents of the Bay year-round. Therefore, Pacific harbor seals are expected to occur in Redwood Creek and Westpoint Slough along the ferry

routes and adjacent to the terminal project area frequently throughout the year, while California sea lions are expected to occur in the project vicinity only as occasional visitors to Redwood Creek and Westpoint Slough. The proposed project may need to obtain Incidental Harassment Authorization under the MMPA from NMFS due to the potential for the proposed project to disturb seals and sea lions during construction due to underwater noise.

## 3.2 State Regulations

### 3.2.1 Porter-Cologne Water Quality Control Act

The SWRCB works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the state. Their authority comes from the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne broadly defines waters of the state as “any surface water or groundwater, including saline waters, within the boundaries of the state.” Because Porter-Cologne applies to any water, whereas the CWA applies only to certain waters, California’s jurisdictional reach overlaps and may exceed the boundaries of waters of the U.S. For example, Water Quality Order No. 2004-0004-DWQ states that “shallow” waters of the state include headwaters, wetlands, and riparian areas (SWRCB 2004).

On April 2, 2019 (and revised April 6, 2021), the SWRCB adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2021). In these guidelines, riparian habitats are not specifically described as waters of the state but instead as important buffer habitats to streams that do conform to the State Wetland Definition. The *Procedures* describe riparian habitat buffers as important resources that may both be included in required mitigation packages for permits for impacts to waters of the state.

Pursuant to the CWA, projects that are regulated by the USACE must also obtain a Section 401 Water Quality Certification permit from the RWQCB. This certification ensures that a proposed project will uphold state water quality standards. Because California’s jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on waters of the state require Water Quality Certification even if the area occurs outside of USACE jurisdiction. Moreover, the RWQCB may impose mitigation requirements even if the USACE does not. Under the Porter-Cologne Act, the SWRCB and the nine regional boards also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits and Waste Discharge Requirements for certain point-source and non-point discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

Project Applicability: All areas considered waters of the U.S., as described in Section 3.1.1 above, are also considered waters of the State. Waters of the State may additionally extend landward to the tops of the banks along the tidal channel. The proposed project would impact waters of the State, and therefore, a Section 401 water quality certification permit from the RWQCB would be necessary.

### 3.2.2 California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Game Code, Chapter 1.5, Sections 2050-2116) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with CESA, the CDFW has jurisdiction over state-listed species (Fish and Game Code 2070). The CDFW regulates activities that may result in *take* of individuals (i.e., “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”). Habitat degradation or modification is not expressly included in the definition of *take* under the California Fish and Game Code. The CDFW, however, has interpreted *take* to include habitat removal “if it is the proximate cause of death to the species” (Caltrans 2012).

Project Applicability: No state listed plant species have the potential to occur on or near the project area (including Bair and Greco Islands). Wildlife species listed under CESA that have potential to occur on or close to the project area are the endangered salt marsh harvest mouse, California Ridgway’s rail, and California least tern; the threatened California black rail (*Laterallus jamaicensis*), tricolored blackbird (*Agelaius tricolor*), and longfin smelt; and the state candidate white sturgeon (*Acipenser transmontanus*) and burrowing owl (*Athene cunicularia*). As described in Section 3.1.4 above, the salt marsh harvest mouse and California Ridgway’s rail occur throughout the year on Bair Island and Greco Island, and the California black rail has also been recorded in portions of Bair Island. California least terns may forage along the ferry routes and near waterside components of the terminal project area but have not been recorded in the landside components of the terminal project area, and the longfin smelt and white sturgeon may occur in both the terminal project area and ferry routes along Redwood Creek, Westpoint Slough, and open Bay waters. The tricolored blackbird and burrowing owl may occasionally forage in the project area. If take of any state-listed or candidate species would result from the proposed project, an Incidental Take Permit (ITP) from CDFW would be necessary.

### 3.2.3 California Environmental Quality Act

CEQA Guidelines Section 15380 defines endangered, rare, or threatened species as follows:

- (a) “Species” as used in this section means a species or subspecies of animal or plant or a variety of plant.
- (b) A species of animal or plant is:
  - (1) “Endangered” when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors; or
  - (2) “Rare” when either:
    - (A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or
    - (B) The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in the Federal Endangered Species Act.

(c) A species of animal or plant shall be presumed to be endangered, rare or threatened, as it is listed in:

- (1) Sections 670.2 or 670.5, Title 14, California Code of Regulations; or
- (2) Title 50, Code of Federal Regulations Section 17.11 or 17.12 pursuant to the Federal Endangered Species Act as rare, threatened, or endangered.

(d) A species not included in any listing identified in subdivision (c) shall nevertheless be considered to be endangered, rare or threatened, if the species can be shown to meet the criteria in subdivision (b).

(e) This definition shall not include any species of the Class Insecta which is a pest whose protection under the provisions of CEQA would present an overwhelming and overriding risk to man as determined by:

- (1) The Director of Food and Agriculture with regard to economic pests; or
- (2) The Director of Health Services with regard to health risks.

### **3.2.4 California Fish and Game Code**

Ephemeral and intermittent streams, rivers, creeks, dry washes, sloughs, blue line streams on USGS maps, and watercourses with subsurface flows fall under CDFW jurisdiction. Canals, aqueducts, irrigation ditches, and other means of water conveyance may also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. A *stream* is defined in Title 14, California Code of Regulations Section 1.72, as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.” Using this definition, CDFW extends its jurisdiction to encompass riparian habitats that function as a part of a watercourse. California Fish and Game Code Section 2786 defines *riparian habitat* as “lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source.” The lateral extent of a stream and associated riparian habitat that would fall under the jurisdiction of CDFW can be measured in several ways, depending on the particular situation and the type of fish or wildlife at risk. At minimum, CDFW would claim jurisdiction over a stream’s bed and bank. Where riparian habitat is present, the outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats.

Pursuant to California Fish and Game Code Section 1602, CDFW regulates any project proposed by any person that will “substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.” California Fish and Game Code Section 1602 requires an entity to notify CDFW of any proposed activity that may modify a river, stream, or lake. If CDFW determines that proposed activities may substantially adversely affect fish and wildlife resources, a Lake and Streambed Alteration Agreement (LSAA) must be prepared. The LSAA sets reasonable conditions necessary to protect fish and wildlife, and must comply with CEQA. The applicant may then proceed with the activity in accordance with the final LSAA.

Certain sections of the California Fish and Game Code describe regulations pertaining to protection of certain wildlife species. For example, Code Section 2000 prohibits take of any bird, mammal, fish, reptile, or amphibian except as provided by other sections of the code.

The California Fish and Game Code Sections 3503, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered *take* by the CDFW. Raptors (e.g., eagles, hawks, and owls) and their nests are specifically protected in California under Code Section 3503.5. Section 3503.5 states that it is “unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”

Bats and other non-game mammals are protected by California Fish and Game Code Section 4150, which states that all non-game mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the commission. Activities resulting in mortality of non-game mammals (e.g., destruction of an occupied nonbreeding bat roost, resulting in the death of bats), or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), may be considered take by the CDFW.

Project Applicability: Because Redwood Creek originates as a freshwater creek draining uplands to the Bay, CDFW may have jurisdiction over the creek under Section 1602 of the California Fish and Game Code. In addition, Westpoint Slough receives input from Flood Slough, which receives input from the Bayfront Canal and Atherton Channel. As a result, CDFW may regulate Westpoint Slough as well. In either case, CDFW’s jurisdiction would extend up to the TOB. The TOB of Redwood Creek and Westpoint Slough are defined by the high tide line (HTL) in the project area. All areas below the HTL/TOB in the project area are defined as aquatic, so no upland riparian bank habitat subject to Section 1600 occurs on-site, just channel/bed habitat within Redwood Creek and possibly Westpoint Slough. Work to be conducted in CDFW jurisdiction would necessitate obtaining an LSAA from CDFW.

Most native bird, mammal, and other wildlife species that occur in the project area and in the immediate vicinity are protected under the California Fish and Game Code. Project impacts on these species are discussed in Section 6.

### **3.2.5 State Water Resources Control Board Stormwater Regulation**

**Construction Phase.** Construction projects in California causing land disturbances that are equal to 1 acre or greater must comply with state requirements to control the discharge of stormwater pollutants under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit; Water Board Order No. 2022-0057-DWQ). Prior to the start of construction/demolition, a Notice of Intent must be filed with the SWRCB describing the project. A Storm

Water Pollution Prevention Plan (SWPPP) must be developed and maintained during the project and it must include the use of best management practices (BMPs) to protect water quality until the project site is stabilized.

Standard permit conditions under the Construction General Permit require that the applicant utilize various measures including: on-site sediment control BMPs, damp street sweeping, temporary cover of disturbed land surfaces to control erosion during construction, and utilization of stabilized construction entrances and/or wash racks, among other factors. Additionally, the Construction General Permit does not extend coverage to projects if stormwater discharge-related activities are likely to jeopardize the continued existence, or result in take, of any federally listed endangered or threatened species.

**Post-Construction Phase.** In many Bay Area counties, including San Mateo County, projects must also comply with the California RWQCB, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit (Water Board Order No. Order Number R2-2022-0018 with amendment R2-2023-0019, NPDES Permit No. CAS612008). This permit requires that all projects implement BMPs and incorporate Low Impact Development practices into the design that prevent stormwater runoff pollution, promote infiltration, and hold/slow down the volume of water coming from a site. In order to meet these permit and policy requirements, projects must incorporate the use of components such as pervious surfaces, tree planters, grassy swales, bioretention and/or detention basins, among other factors.

Project Applicability. The proposed project shall comply with the requirements of the NPDES Statewide Stormwater Permit and Statewide General Construction Permit. Therefore, construction-phase activities shall not result in detrimental water quality effects on biological or regulated resources.

### 3.2.6 The McAteer-Petris Act

The McAteer-Petris Act, enacted on September 17, 1965, serves as a legal provision under California state law to preserve San Francisco Bay from indiscriminate filling. The act initially established the BCDC as a temporary state agency charged with preparing a plan for the long-term use of the San Francisco Bay. In August 1969, the McAteer-Petris Act was amended to make BCDC a permanent regulatory agency to incorporate the policies of the Bay Plan. BCDC jurisdiction includes a 100-foot-wide band along the shoreline of the San Francisco Bay. The *shoreline* is defined as all areas that are subject to tidal action from the south end of the San Francisco Bay to the Golden Gate (Point Bonita–Point Lobos), and to the Sacramento River line (a line between Stake Point and Simmons Point, extended northeasterly to the mouth of Marshall Cut). The BCDC has jurisdiction over all sloughs (specifically marshlands lying between mean high tide and up to 5 feet above mean sea level where marsh vegetation is present); tidelands (lands between mean high tide and mean low tide); and submerged lands (land lying below mean low tide) in this region. The McAteer-Petris Act also requires that maximum feasible public access consistent with a project be included as part of each project to be approved by the BCDC.

Project Applicability: Along the majority of the Bay shoreline, where the land is bordered by Redwood Creek to the west and Westpoint Slough to the north and vegetated marsh is absent, BCDC's Bay jurisdiction is defined by the mean high water (MHW) elevation, which is 6.51 feet NAVD88 at the project area (AECOM

2016) (Figure 4). Along the tidal channel at the northeastern side of the terminal project area where narrow bands of tidal salt marsh are present, and within the tidal wetland at the northwest corner of the terminal project area, the upper limit of BCDC's Bay jurisdiction (the Bay Shoreline) is defined as the mean sea level (MSL) elevation plus 5 feet (8.35 feet NAVD88 at the terminal project area), or upper extent of marsh vegetation, whichever is lower. A 100-foot area extending landward of the extent of Bay jurisdiction is defined as the BCDC Shoreline Band. Work within BCDC's Bay jurisdiction and within the 100-foot shoreline band would require a permit from BCDC.

## **3.3 Local Regulations**

### **3.3.1 City of Redwood City Tree Protection Policies**

Redwood City has a street tree ordinance and a street tree preservation ordinance. The Redwood City Street Tree Ordinance (Ordinance No. 1010, Section 1) requires the issuance of a permit for the planting, pruning, or removal of trees in the public right-of-way. The Redwood City Tree Preservation Ordinance (Ordinance No. 1536, Section 1, 6-26-72) requires the issuance of a permit from the City Parks and Recreation Director to allow the removal of trees with a circumference of 38-inches or more on private property. Issuance of a tree removal permit is based on factors including the condition of the trees, necessity to remove the trees, topography of the land and impacts of tree removal on erosion, number of trees in the neighborhood, and good forestry practices. Section 35.2 of the Redwood City Municipal Code states that the Commission may declare any tree, regardless of size, to be a heritage tree if said tree is healthy and has adapted well to the climatic conditions of the area, if said tree is visually accessible from a public right-of-way, and if the Commission finds that at least one of the following conditions exist: that said tree 1) has historical significance, 2) is indigenous to the area, or 3) is one of a group of tree and that each is dependent on the other tree for survival. Section 35.3 states that it is unlawful for any person to cut, move, or remove or cause to be cut, moved or removed any tree, unless such person first obtains a permit from the Parks and Recreation Director to do so in a manner prescribed by him for such removal.

Project Applicability: Trees potentially subject to the City's tree ordinances are present in the terminal project area bordering Seaport Boulevard. A small number of trees would be removed as a part of the proposed project, therefore the proposed project would comply with Redwood City's tree ordinances' permit requirements.



## Section 4. Environmental Setting

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### 4.1 General Terminal Project Area Description

The terminal project area is located in the City of Redwood City and is defined by the areas subject to project development, on land and both in and adjacent to Redwood Creek and Westpoint Slough. The terminal project area consists of land that has been altered by human activity since at least 1924 (USGS 1993). The area has been developed for over 100 years, but is surrounded by tidal salt marshes, most notably Bair and Greco Islands. Both islands are part of the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge). The terminal project area has been topographically altered by industrial operations and the movement and stockpiling of gravel and sand. The portion of the terminal project area that is outside of the stockpiling operations is relatively flat with elevations close to sea level (Google LLC 2025). Soils are mapped as Urban land-Orthents, reclaimed complex, 0 to 2 percent slopes, which is a common soil classification for locations along the San Francisco Bay Shoreline that consists of fill soils.

The project site is owned by the Port and is under a month-to-month lease to CEMEX, which has used it for the stockpiling of materials for recycling and sale of concrete base rock. CEMEX is currently in the process of vacating the project site and, pursuant to lease terms, is removing landside improvements located on-site, including a storage building, equipment and machinery, and stockpiles. Per the lease agreement with CEMEX and addressed under a previous CEQA evaluation (Port of Redwood City 2001), CEMEX is in the process of filling the narrow muted tidal channel located adjacent to the northern terminus of the railroad tracks at the northeast side of the project site that is connected to Westpoint Slough via an underground culvert. A drainage pipe will be installed to convey stormwater to the outlet in Westpoint Slough. The shoreline is largely armored with broken concrete, riprap, and other debris that may have been used to stabilize the fill slope. The Shell Unloading Wharf, an abandoned cement wharf construction in 1962 that was used for unloading oyster shells dredged from the Bay to process into cement, extends parallel from the shore into Westpoint Slough at the northern edge of the project site.

### 4.2 Land Cover/Habitat Types

The terminal project area is predominantly developed, including existing facilities operations buildings, hard packed dirt areas, paved and dirt roads, and associated ornamental landscaping. Approximately 11.86 acres of the approximately 14-acre terminal project area are considered developed. Additional land cover/habitat types mapped within the terminal project area are tidal salt marsh (0.12 acre), open water/tidal aquatic (1.15 acres), ruderal (1.54 acres), and muted tidal marsh (0.03 acre). These habitat types are depicted on Figure 5 and are described in detail below. Plant species observed during the reconnaissance survey are listed in Appendix A, and representative photos of the habitat types are provided in Appendix B.



#### 4.2.1 Developed

**Vegetation.** Developed areas comprise the most dominant land cover type in the terminal project area. This land cover type includes the CEMEX stockpiling operations area including all buildings, streets, railroad tracks, paved walkways and parking areas, and any portions of the Bay Trail that intersect the terminal project area. An abandoned cement wharf (Shell Unloading Wharf) is found along the northern shoreline. The developed land cover also includes areas that have been planted with landscaping and are maintained on an ongoing basis. Landscaping in the terminal project area consists of ornamental trees, shrubs, and groundcovers that are typical of commercial and office developments in the area.

**Wildlife.** Developed areas that are devoid of vegetation do not provide high-quality wildlife habitat; however, lizards, such as the western fence lizard (*Sceloporus occidentalis*), may bask on these surfaces. Other wildlife most often associated with developed areas are those that are tolerant of periodic human disturbance, including introduced species such as the European starling (*Sturnus vulgaris*), rock pigeon (*Columba livia*), house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), and black rat (*Rattus rattus*). The native striped skunk (*Mephitis mephitis*) and raccoon (*Procyon lotor*) also often occupy developed or ruderal habitats near the Bay and likely occur in the terminal project area. Some common, native bird species are also able to utilize these habitats for nesting and roosting, especially around the ornamental trees. These include the American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), and Bewick's wren (*Thryomanes bewickii*), all of which were observed in the terminal project area during the reconnaissance surveys. Additional species, such as the ruby-crowned kinglet (*Corthylio calendula*), yellow-rumped warbler (*Setophaga coronata*), white-crowned sparrow (*Zonotrichia leucophrys*), and golden-crowned sparrow (*Zonotrichia atricapilla*), occur in landscape vegetation during the nonbreeding season.

The large, abandoned cement Shell Unloading Wharf located along the northern edge of the project site near the confluence of Redwood Creek and Westpoint Slough supports a moderate-sized colony of approximately 150 cliff swallow (*Petrochelidon pyrrhonota*) pairs. The abandoned wharf may also at times support roosting seabirds such as California gull (*Larus californicus*), western gull (*Larus occidentalis*), and brown pelican (*Pelecanus occidentalis*).

Marginally suitable roosting habitat for crevice-roosting bats such as the Yuma myotis (*Myotis yumanensis*) and Mexican free-tailed bat (*Tadarida brasiliensis*) is present underneath loose bark on Fremont cottonwood (*Populus fremontii*) and *Pinus* spp. trees in the terminal project area. Likewise, several trees provide low-quality habitat for the foliage-roosting hoary bat (*Lasiurus cinereus*) and western red bat (*Lasiurus blossevillei*). No cavities that could support roosting bats were observed in trees within the terminal project area. The maintenance building within the terminal project area that would be relocated does not contain suitable roosting habitat on its exterior, and due to frequent human disturbance, would not support roosting bats in their interior. Due to the limited suitable habitat, the terminal project area would not support maternity roosts or large bat roosts; at most, only small numbers of bats could roost in the terminal project area. Birds such as the black phoebe (*Sayornis nigricans*), barn swallow (*Hirundo rustica*), cliff swallow, house finch (*Haemorhous mexicanus*), and mourning dove (*Zenaidura macroura*) could potentially nest on buildings in the terminal project area.

#### 4.2.2 Ruderal

**Vegetation.** Along the Bay and the tidal salt marsh, banks transitioning between the developed upland portions of the terminal project area and the wetland/aquatic habitats downslope are dominated by ruderal vegetation. This vegetation includes a variety of upland non-native grasses and forbs such as fennel (*Foeniculum vulgare*), wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), black mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*), and artichoke thistle (*Cynara cardunculus*).

**Wildlife.** Due to the very limited extent of ruderal habitat in the terminal project area, no distinctive animal communities (such as grassland-associated species) are associated with this habitat type, and bird species associated with the surrounding developed and landscaped areas may forage, roost, and nest on the ruderal levee slopes in low numbers. In addition, salt marsh adapted species such as Alameda song sparrow (*Melospiza melodia pusillula*) may use this habitat for foraging where it is adjacent to Redwood Creek, Westpoint Slough, and tidal salt marsh along the tidal channel at the east side of the project site, and in the case of the Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*), may also nest in these areas.

#### 4.2.3 Muted Tidal Marsh

**Vegetation.** A tidal channel at the east side of the project site is approximately 20 feet wide and extends from Westpoint Slough inland for approximately 80 feet until it is culverted under a historic land bridge (dating back to before 1946). The channel has muted tidal influence from that point upslope, where it continues in a linear fashion for another 220 feet in a southerly direction within the project site. The muted tidal marsh had slow flowing water at the time of the June 20, 2024 site visit, with algae growing on the surface. The water was flanked by steep banks. The banks, closer to the standing water, were dominated by pickleweed (*Salicornia pacifica*) and alkali bulrush (*Bolboschoenus maritimus*) and quickly transitioned to fennel and black mustard near the top of the bank. As analyzed in a previous CEQA evaluation (Port of Redwood City 2001), CEMEX would fill the portion of the tidal channel south of the culvert and install a drainage pipe to convey stormwater to the tidal outlet on Westpoint Slough before vacating the property, pursuant to CEMEX's lease agreement, so this habitat type is not expected to be present at the time of the Ferry Terminal project or impacted by the proposed project.

**Wildlife.** Due to the very limited extent of this habitat and the disturbed nature of the ditch in which it occurs, wildlife using the muted tidal marsh in the terminal project area are similar to those using adjacent ruderal habitats.

#### 4.2.4 Tidal Salt Marsh

**Vegetation.** Tidal salt marsh is present in the northwestern corner of the project site adjacent to the abandoned cement Shell Unloading Wharf. The tidal salt marsh in the northern corner of the project site is more diverse and dominated by halophytic wetland vegetation including: pickleweed, alkali heath (*Frankenia salina*), salt grass (*Distichlis spicata*), marsh jaumea (*Jaumea carnosa*), and Russian thistle (*Salsola soda*). The tidal salt marsh wetland contains a small area lacking vegetation where water is likely to pond longer during the highest tides. The tidal

salt marsh bordering the tidal channel contained mostly pickleweed with scattered gumplant (*Grindelia stricta*), alkali bulrush (*Bolboschoenus maritimus*), and saltmarsh cordgrass (*Spartina* sp.). Vegetation quickly transitions into ruderal upland vegetation such as wild oat and fennel as the slope increases away from Westpoint Slough.

Additionally, tidal salt marsh habitat exists across Redwood Creek and Westpoint Slough on Bair Island and Greco Island, respectively. The tidal salt marsh on Bair and Greco Islands appeared to be of better quality, extending landward into a network of tidal sloughs. Vegetation observed through binoculars at the time of the June 20, 2024 site visit was dominated by pickleweed.

**Wildlife.** Due to the very limited extent of salt marsh in the terminal project area, most animals characteristic of San Francisco Bay salt marshes are expected to make little use of these habitats in the terminal project area. Although California Ridgway's rails dispersing from nearby Bair and Greco Islands could potentially rest or forage briefly in the salt marsh in the project site, this habitat is of low quality even for foraging and, due to its limited extent, it does not provide suitable cover for rails. Likewise, the extent and height of pickleweed in this habitat is too limited to provide appropriate cover for salt marsh harvest mice, and they are not expected to occur in the terminal project area. This habitat is not sufficiently extensive or structurally diverse (e.g., dense/tall) to provide suitable nesting habitat for the San Francisco common yellowthroat (*Geothlypis trichas sinuosa*) or Alameda song sparrow, and those species would occur in the terminal project area only as occasional individuals dispersing from nearby suitable habitats. Wildlife using the salt marsh habitats in the terminal project area would consist primarily of species associated with adjacent habitats. House finches, American crows, and other birds, as well as house mice, black rats, raccoons, and striped skunks, forage in the limited salt marsh in the terminal project area.

While tidal salt marsh habitat in the terminal project area is limited in extent and of low quality, conversely, tidal marsh habitat found at Bair and Greco Islands is large in extent and of relatively high quality. As such, tidal marsh habitat on these islands support robust populations of tidal marsh dependent species such as Ridgway's rails and salt marsh harvest mice, likely also support salt marsh wandering shrew (*Sorex vagrans halicoetes*), and may also support California black rail. On the east side of Outer Bair Island, located along Redwood Creek and the open Bay, oyster shell beaches found along the edge of the marsh may support western snowy plovers, possibly including breeding.

#### 4.2.5 Open Water/Tidal Aquatic

**Vegetation.** The tidal channel located in the northeastern portion of the project site flows in the north/south direction, perpendicular to the shoreline, and is culverted twice, including a segment located outside of the terminal project area. The tidal channel is approximately 25 feet in width and includes a tide gate with a one-way flap that is approximately 80 feet from the entrance to Westpoint Slough and mutes tidal exchange within the muted tidal marsh. North of the tide gate, the channel is fully tidal.

Open water/tidal aquatic habitat is also present in Redwood Creek up to the TOB/HTL and Westpoint Slough up to the HTL. Rip-rap located on the banks of the channels is below the TOB and HTL and is considered

part of the tidal channel/aquatic habitat. Rip-rap areas were devoid of vegetation at the time of the June 20, 2024 site visit. Redwood Creek and Westpoint Slough converge at the northern portion of the terminal project area and lead directly into the San Francisco Bay.

**Wildlife.** Redwood Creek, Westpoint Slough, and the open waters of San Francisco Bay immediately north and west of the terminal project area and along the proposed ferry routes support a variety of fish, waterbirds, and marine mammals. Fish include the bat ray (*Myliobatis californica*), Pacific herring (*Clupea pallasii*), threespine stickleback (*Gasterosteus aculeatus*), starry flounder (*Platichthys stellatus*), northern anchovy, and topsmelt (*Atherinops affinis*). The opening of the culvert to the tidal channel on the northeast side of the project site was not visible during the June 20, 2024 site visit, but as the channel was filled with algae, it does not appear to support any fish. No high-quality breeding or nursery habitat for any fish is present in the terminal project area, however both Bair and Greco Island contain high quality fish breeding and nursery habitat. Redwood Creek, Westpoint Slough, and the proposed ferry route to San Francisco do not contain any known patches of eelgrass (BCDC 2020). The proposed ferry route to Oakland contains a small amount of mapped eelgrass along the edge of the Oakland Estuary (BCDC 2020).

A variety of waterbirds that frequently forage for fish and marine invertebrates in Redwood Creek, Westpoint Slough, and open Bay waters adjacent to the terminal project area and along the proposed ferry routes include surf scoter (*Melanitta perspicillata*), lesser scaup (*Aythya affinis*), greater scaup (*Aythya marila*), western gull, Caspian tern (*Hydroprogne caspia*), Forster's tern (*Sterna forsteri*), brown pelican, bufflehead (*Bucephala albeola*), green-winged teal (*Anas crecca*), mallard (*Anas platyrhynchos*), western grebe (*Aechmophorus occidentalis*), and Clark's grebe (*Aechmophorus clarkii*). Waterbird abundance and diversity in the terminal project area is more limited, though Canada geese (*Branta canadensis*), American coots (*Fulica americana*), and mallards may forage along the terminal project area in Redwood Creek, Westpoint Slough, and the tidal channel.

The intertidal areas along the Bay shoreline, which include a moderate sized mudflat at the confluence of Redwood Creek and Westpoint Slough and a much smaller mudflat between the abandoned cement Shell Unloading Wharf and tidal channel, provide foraging habitat for a variety of gulls and shorebirds, including the western gull, California gull, western sandpiper (*Calidris mauri*), least sandpiper (*Calidris minutilla*), dunlin (*Calidris alpina*), willet (*Tringa semipalmata*), greater yellowlegs (*Tringa melanoleuca*), marbled godwit (*Limosa fedoa*), and black-bellied plover (*Pluvialis squatarola*). Shorebirds are most abundant during fall and spring migration and during the winter non-breeding season.

### 4.3 Wildlife Movement

Wildlife movement within and in the vicinity of the project footprint takes many forms, and is different for the various suites of species associated with these lands. Bird and bat species move readily over the landscape in the project vicinity, foraging over and within both natural lands and landscaped areas. Mammals of different species move within their home ranges, but also disperse between patches of habitat. Generally, reptiles and amphibians similarly settle within home ranges, sometimes moving to central breeding areas, upland refugia, or

hibernacula in a predictable manner, but also dispersing to new areas. Some species, especially among the birds and bats, are migratory, moving into or through the project vicinity during specific seasons. Aside from bats, there are no other mammal species in the vicinity of the site that are truly migratory. However, the young of many mammal species disperse from their natal home ranges, sometimes moving over relatively long distances in search of new areas in which to establish.

Movement corridors are segments of habitat that provide linkage for wildlife through the mosaic of suitable and unsuitable habitat types found within a landscape while also providing cover. On a broader level, corridors also function as paths along which wide-ranging animals can travel, populations can move in response to environmental changes and natural disasters, and genetic interchange can occur. In California, environmental corridors often consist of riparian areas along streams, rivers, or other natural features.

Due to the density of development in the project region and the lack of continuous, well-vegetated pathways through the nearby urban areas, there are currently no well-defined movement corridors for animals within or through the terminal project area. Wildlife species may move through the area using cover and refugia as they find them available, and mammals and reptiles may move along the bayshore. However, connectivity along Redwood Creek and Westpoint Slough is interrupted by U.S. 101 and other roads and culverted areas.

Migratory birds, including waterbirds associated with the Bay and terrestrial species, migrate along the edge of San Francisco Bay. For example, nocturnal migrant birds that find themselves over the Bay in the morning will seek roosting and foraging areas along the edge of the Bay. As a result, numbers of migrant birds in the terminal project area, or at least moving through/past the terminal project area, would be higher than expected based on the low quality of habitat currently present on the predominantly developed site.

The open water of the project footprint, including Redwood Creek, Westpoint Slough, and the San Francisco Bay, support the movement of numerous common fish species (Otolith Geochemistry & Fish Ecology 2026). No special-status fish species breed in, or occur in large numbers, in Redwood Creek or Westpoint Slough. Anadromous fish species may occur in San Francisco Bay along the ferry route, but are not confined to the small portion of the Bay within established vessel lanes. Harbor seals regularly occur in Redwood Creek and Westpoint Slough as they transit between their haul out site on Corkscrew Slough and the San Francisco Bay. Both fish and marine mammals may also reach the open water of the San Francisco Bay via Steinberger Slough.

In summary, the project footprint is not heavily used for movement by non-flying wildlife due to the lack of food and resting sites, and it does not contain any high-quality corridors allowing dispersal of such animals. The aquatic portions of the project footprint support the movement of fish and marine mammals, but are not heavily used corridors for movement and dispersal. However, migratory birds are expected to occur on, or at least fly through/past, the terminal project area in moderate abundance.

## Section 5. Special-Status Species and Sensitive Habitats

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CEQA requires assessment of the effects of a project on species that are protected by state, federal, or local governments as “endangered, rare or threatened”; such species are typically described as “special-status species”. For the purpose of the environmental review of the proposed project, special-status species have been defined as described below. Impacts on these species are regulated by some of the federal, state, and local laws and ordinances described in Section 3 above.

For purposes of this analysis, “special-status” plants are considered plant species that meet one or more of the following criteria:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, rare, or a candidate species.
- Listed by the CNPS as CRPR 1A, 1B, 2, 3, or 4.

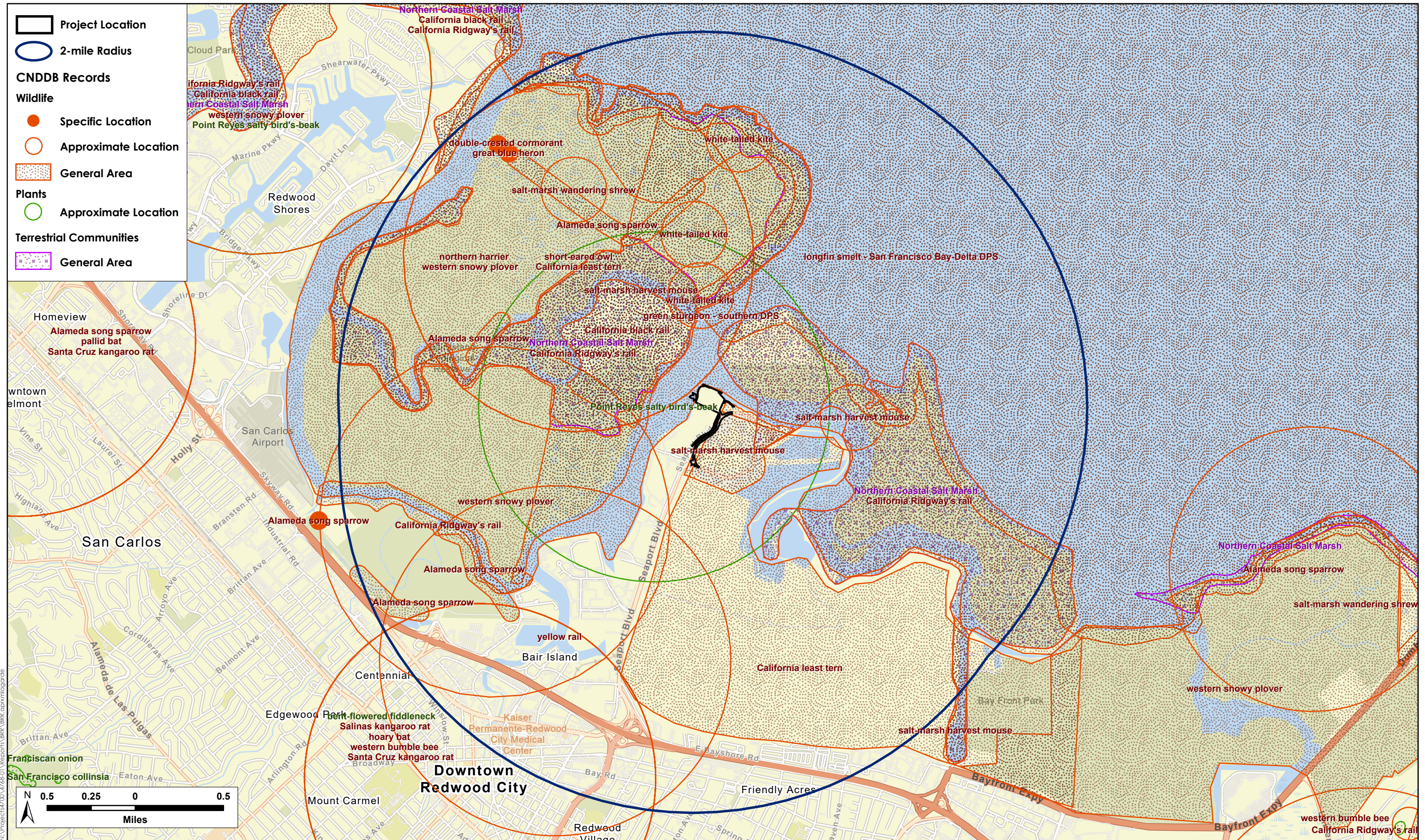
For purposes of this analysis, “special-status” animals are considered animal species that meet one or more of the following criteria:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, or a candidate threatened or endangered species.
- Designated by the CDFW as a California species of special concern.
- Listed in the California Fish and Game Code as fully protected species (fully protected birds are provided in Section 3511, mammals in Section 4700, reptiles and amphibians in Section 5050, and fish in Section 5515).

Information concerning threatened, endangered, and other special-status species that potentially occur in the project area was collected from several sources and reviewed by H. T. Harvey & Associates biologists as described in Section 2.1 above. Figure 6 depicts CNDDDB records of special-status plant and animal species in the general vicinity of the terminal project area. These generalized maps show areas where special-status species are known to occur or have occurred historically.

### 5.1 Special-Status Plant Species

A list of 77 special-status plant species thought to have some potential for occurrence in the general vicinity of Redwood City was compiled using CNPS lists (CNPS 2025) and CNDDDB records (CNDDDB 2025). Analysis



of the documented habitat requirements and occurrence records associated with all of the species considered allowed us to reject all but three of the 77 species as not having a reasonable potential to occur in or immediately adjacent to the terminal project area for at least one of the following reasons: (1) lack of suitable habitat types; (2) absence of specific microhabitat or edaphic (soil) requirements, such as serpentine soils; (3) the elevation range of the species is outside of the range on the terminal project area; and/or (4) the species is presumed extirpated. The terminal project area is a developed site and is situated on Bay fill that would have historically been either open waters or tidal salt marsh but that, in most areas, does not provide suitable habitat for special-status plants. The tidal channel in the eastern portion of the terminal project area, as well as the tidal salt marsh wetland, is expected to provide only marginally suitable habitat for special-status plant species that are typically found in salt marsh due to the disturbed nature of these features.

Suitable habitat, edaphic requirements, and elevation range are present within and adjacent to the terminal project area for Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*, CRPR 1B.1), Point Reyes bird's beak (*Chloropyron maritimum* ssp. *palustre*, CRPR 1B.2), and California seablite (*Suaeda californica*, CRPR 1B.1 and federally endangered). Congdon's tarplant occurs on alkaline soils in valley and foothill grassland in depressions, swales, and floodplains, often in disturbed areas with non-native grasses. Within this broad habitat type, Congdon's tarplant is most successful along the boundaries of seasonal wetlands or in other areas where competing vegetation is sparse (i.e., heavily grazed areas or recently disturbed areas, or levee slopes). It has a variable blooming period extending from May through November. The closest occurrence of Congdon's tarplant to the terminal project area is within the Shoreline at Mountain View Park, approximately 9 miles southeast of the terminal project area. This occurrence consists of a population of 78 individuals (CNDDB 2025). Because this species has the potential to occur in disturbed habitats, there is potential (albeit low) for it to occur in ruderal habitat along the edges of the tidal salt marsh wetlands within the terminal project area. Although this species may not have been flowering at the time of the site visits, it would have been identifiable to at least the genus level in the vegetative state. No tarplant individuals (*Centromadia* sp.) were observed during the June 20, 2024 survey, and the subsequent July 30, 2024 survey, so this species is considered absent.

Point Reyes bird's beak occurs within coastal salt marshes and swamps in and around the Bay Area, as well as the Oregon Coast. This species is found in sparse to densely vegetated tidal salt marshes with common associated species such as salt grass, marsh jaumea, and pickleweed; all of which were observed growing in the tidal salt marsh within the terminal project area. Point Reyes bird's beak has a blooming period between June and October. The closest occurrence of Point Reyes bird's beak to the terminal project area is from the year 1900 within Ravenswood Open Space Preserve, approximately 5 miles southeast of the terminal project area (CNDDB 2025). Point Reyes bird's beak was not observed in the tidal salt marshes within the terminal project area during the June 20, 2024 survey, and the subsequent July 30, 2024 survey, so this species is considered absent from the terminal project area.

California seablite is an evergreen shrub or subshrub occurring within coastal salt marshes and wetlands. It is known from very few occurrences in the San Francisco Bay, the closest of which is located at Baylands Nature Preserve, approximately 6.5 miles southeast of the terminal project area (CNDDB 2025). California seablite

blooms from July through October. The tidal salt marsh on the northern portion of the terminal project area contains potentially suitable habitat for this species. During the site visit on June 20, 2024, an individual of alkali Russian thistle (*Salsola soda*), an invasive non-native species commonly found on the bay shoreline, was observed. This individual had unique morphological characteristics that resembled California seablite. After a follow-up site visit on July 30, 2024, and visiting a reference site for the species in Emeryville on August 6, 2024, it was determined that California seablite was absent from the terminal project area and that the individual species in question was indeed the common species, alkali Russian thistle.

Due to the presence of suitable habitat, edaphic requirements, and elevation range, Point Reyes bird's beak and California seablite could possibly occur in tidal marshes at Bair Island and Greco Island along the ferry route. However, given the lack of recent occurrences in the project vicinity, these species' potential for occurrence in those areas is very low.

## 5.2 Special-Status Animal Species

The legal status and likelihood of occurrence in the project area of special-status animal species known to occur, or potentially occurring, in the project region are presented in Table 2. Those species that may breed or reside year-round within the terminal project area or along ferry routes are considered “present”; those that occur regularly but only as non-breeding individuals or seasonally are considered “absent as breeders”; and those that could possibly occur in these areas, but not on a consistent basis, are considered “may be present”. Some of the special-status species listed in Table 2 are not expected to occur on the terminal project area or ferry routes because they lack suitable habitat, are outside the known range of the species, and/or are isolated from the nearest known extant populations by development or otherwise unsuitable habitat. Animal species not expected to occur on the terminal project area or along ferry routes for these reasons include the Bay checkerspot butterfly (*Euphydryas editha bayensis*), mission blue butterfly (*Icaricia icarioides missionensis*), San Bruno elfin butterfly (*Callophrys mossii bayensis*), Callippe silverspot butterfly (*Speyeria callippe callippe*), Myrtle's silverspot butterfly (*Speyeria zereene myrtleae*), western bumble bee (*Bombus occidentalis occidentalis*), California red-legged frog (*Rana draytonii*), San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), long-eared owl (*Asio otus*), Townsend's big-eared bat (*Corynorhinus townsendii*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), and northwestern pond turtle (*Actinemys marmorata*).

A number of special-status species can occasionally occur on or immediately adjacent to the terminal project area as nonbreeding foragers (i.e., they do not nest in the terminal project area). These are the burrowing owl, California least tern, tricolored blackbird, Vaux's swift (*Chaetura vauxi*), olive-sided flycatcher (*Contopus cooperi*), yellow warbler (*Setophaga petechia*), and western red bat. None of these species are expected to occur regularly or in large numbers in the terminal project area, though, due to lack of suitable nesting habitat within or immediately adjacent to the terminal project area. Several additional species are found year-round within tidal marshes adjacent to the ferry routes along Redwood Creek, including the salt marsh harvest mouse, salt marsh wandering shrew, California Ridgway's rail, California black rail, San Francisco common yellowthroat, Alameda song sparrow, and Bryant's savannah sparrow.

Although the California sea lion and Pacific harbor seal occur in Redwood Creek and Westpoint Slough immediately adjacent to the terminal project area and in the Bay along the ferry routes, these species do not occur in the terminal project area itself (e.g., enter the channel between the tidal channel and Westpoint Slough) or regularly haul out onto the shoreline adjacent to the project area. Redwood Creek, Westpoint Slough, and the open waters of San Francisco Bay in the ferry routes immediately adjacent to the terminal project area provide potential foraging habitat for the Central California Coast steelhead, white sturgeon, southern green sturgeon, longfin smelt, Pacific lamprey (*Entosphenus tridentatus*), and Central Valley fall-run Chinook salmon. Pacific herring regularly spawn approximately 8 miles northwest of the terminal project area at Coyote Point (CDFW 2019b). Bair Island provides suitable herring spawning habitat, and spawning has been reported in the vicinity of Redwood City (CDFW 2000), however spawning does not regularly occur in the area. The abandoned cement Shell Unloading Wharf, riprap, and rock found along Redwood Creek and Westpoint Slough immediately adjacent to the terminal project area provide a small amount of suitable spawning habitat. The Olympia oyster (*Ostrea lurida*) occurs throughout the San Francisco Bay along rocky shorelines, including Redwood Creek, where there were two observations of this species in 2023 (iNaturalist 2025). The abandoned cement Shell Unloading Wharf along Westpoint Slough provides potentially suitable habitat for these species, although no oysters were observed during the June 20, 2024 site visit. Otherwise, the terminal project area provides low quality habitat due to the lack of extensive or large rocks and other hard substrates. No oyster reef locations are known along the ferry routes (Wild Oyster Project 2024).

The monarch butterfly is not known to breed or overwinter in the terminal project area or in the nearby vicinity, but it could occasionally forage in the area and roost on the trees on-site during their fall and spring migration.

**Table 2. Special-Status Animal Species, Their Status, and Potential Occurrence in the Project Area**

| Name                                                                   | *Status | Habitat                                                                                                                                                                                                                                                     | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Federal or State Endangered, Threatened, or Candidate Species</b>   |         |                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                        |
| Bay checkerspot butterfly<br>( <i>Euphydryas editha bayensis</i> )     | FT      | Restricted to areas with shallow serpentine-derived or similar soils that have substantial populations of dwarf plantain, a primary larval host plant, and purple owl's clover, a secondary larval and adult host plant.                                    | Absent. No suitable serpentine grassland habitat or larval host plants are present in the terminal project area. Thus, this species is determined to be absent.                                                                                                                                                                        |
| Mission blue butterfly<br>( <i>Icaricia icarioides missionensis</i> )  | FE      | Coastal chaparral and coastal grasslands. Larval host plants are <i>Lupinus</i> spp.                                                                                                                                                                        | Absent. The closest known population is located at San Bruno Mountain approximately 15.3 miles northwest of the terminal project area (CNDDDB 2025). No suitable chaparral or grassland habitat is present on or near the terminal project area. Thus, this species is determined to be absent.                                        |
| San Bruno elfin butterfly<br>( <i>Callophrys mossii bayensis</i> )     | FE      | Coastal mountains near San Francisco Bay in the fog-belt of steep, north-facing slopes. Lives near abundant growth of broadleaf stonecrop ( <i>Sedum spathulifolium</i> ), its larval host plant that grows on rocky outcrops on steep north facing slopes. | Absent. All known San Bruno elfin butterfly populations are restricted to San Bruno Mountain, Milagra Ridge, the San Francisco Peninsula Watershed, and Montara Mountain. No suitable habitat or larval host plant is present in the terminal project area. Determined to be absent.                                                   |
| Callippe silverspot butterfly<br>( <i>Speyeria callippe callippe</i> ) | FE      | Grasslands of the northern San Francisco Bay region. Larval host plant is <i>Viola pedunculata</i> .                                                                                                                                                        | Absent. Callippe silverspot butterfly populations in the project vicinity are only known to occur on San Bruno Mountain, Milagra Ridge, the San Francisco Peninsula Watershed, and Montara Mountain. No suitable habitat or larval host plant is present in the terminal project area. Determined to be absent.                        |
| Myrtle's silverspot butterfly<br>( <i>Speyeria zerene myrtleae</i> )   | FE      | Coastal dune and prairie habitat. Larval host plants are violets, typically <i>Viola adunca</i> .                                                                                                                                                           | Absent. Although the historical distribution of this species included San Mateo County, its current extant range is believed to be restricted to the region within or near the Point Reyes National Seashore. Additionally, no suitable habitat or larval host plant is present in the terminal project area. Determined to be absent. |

| Name                                                 | *Status | Habitat                                                                                                                                                                                                                                                                                                         | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monarch butterfly<br>( <i>Danaus plexippus</i> )     | FC      | Adults forage on a wide variety of flowers for nectar and occur in a variety of habitats, but egg-laying and larval development occurs on milkweeds, which are more limited in distribution. Typically roosts on the branches and leaves of trees which receive appropriate sun exposure and thermal buffering. | Absent as Breeder. No milkweed has been observed in the terminal project area, so this species is not expected to breed here. The closest documented overwintering sites are located at Coyote Point in San Mateo County and across the San Francisco Bay at Coyote Hills Regional Park in Alameda County, approximately 8 miles northwest and 7 miles east of the terminal project area, respectively. No overwintering sites are known from the terminal project area (Xerces Society for Invertebrate Conservation 2025). Individuals may occur in the terminal project area as occasional migrants, but this species is not expected to form large roosts or to breed in the terminal project area. |
| Western bumble bee<br>( <i>Bombus occidentalis</i> ) | SC      | Meadows and grasslands with abundant floral resources.                                                                                                                                                                                                                                                          | Absent. Although the species was historically found throughout much of central and northern California (CDFW 2019a), including the project vicinity, it is not expected to occur in the terminal project area due to recent range contractions. Further, this species has not been observed in the project vicinity since the 1960s (CNDDDB 2025). Determined to be absent.                                                                                                                                                                                                                                                                                                                             |
| Crotch's bumble bee<br>( <i>Bombus crotchii</i> )    | SC      | Grasslands and shrublands with abundant floral resources, undisturbed nesting and overwintering sites.                                                                                                                                                                                                          | Absent. Although the species was historically found throughout much of central California and portions of northern California (CDFW 2019a), including the project vicinity, it is not expected to occur in the terminal project area due to recent range contractions and lack of suitable habitat. The closest recent observation of this species was in 2023 at Palo Alto Baylands, approximately 6.6 miles southeast from the terminal project area (iNaturalist 2025). Determined to be absent.                                                                                                                                                                                                     |

| Name                                                                 | *Status  | Habitat                                                                                                                               | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Central California Coast steelhead<br>( <i>Oncorhynchus mykiss</i> ) | FT       | Cool streams with suitable spawning habitat and conditions allowing migration between spawning and marine habitats.                   | May be Present. Central California Coast steelhead occur in the San Francisco Bay and are known to spawn in the nearby Alameda Creek, San Mateo Creek, and San Francisquito Creek watersheds (Spence et al. 2012, Becker and Reining 2008), and adults and yearling juveniles may be present as occasional foragers in open waters of the San Francisco Bay. Designated critical habitat includes San Francisco Bay up to the perimeter of the Bay water or the elevation of extreme high water, whichever is higher (NMFS 2000, 2005). Critical habitat extends into the project area along Redwood Creek and Westpoint Slough, and this species may occasionally forage within these areas.                                                                                                                                                        |
| Southern Green sturgeon<br>( <i>Acipenser medirostris</i> )          | FT, CSSC | Spawns in large river systems such as the Sacramento River; forages in nearshore oceanic waters, bays, and estuaries.                 | May be Present. Southern green sturgeon occur in the San Francisco Bay between the spring and fall (Kelly et al. 2006). All tidally influenced areas of the Bay, up to the elevation of mean higher high water, have been designated as critical habitat for this species. Spawning of this southern distinct population segment occurs predominantly in the upper Sacramento River (Adams et al. 2007). Southern green sturgeon have been captured in the central portion of the Bay north of the San Mateo Bridge (K. Hieb, CDFW, pers. comm.) in the vicinity of the ferry routes, and may forage infrequently, and in low numbers, in San Francisco Bay waters along the ferry routes. Critical habitat extends into the project area along Redwood Creek and Westpoint Slough, and this species may occasionally forage within these waterways. |
| Longfin smelt<br>( <i>Spirinchus thaleichthys</i> )                  | FE, ST   | Spawns in fresh to brackish water in the upper end of the San Francisco Bay and far South Bay; may occur year-round in the South Bay. | May be Present. Longfin smelt occur in the San Francisco Bay, and adults and yearling juveniles may be present as occasional foragers in Redwood Creek, Westpoint Slough, and open Bay waters along the ferry routes. These waterways are too saline to support breeding, and it is likely that longfin smelt only occur in small numbers, primarily in winter. This species may occasionally forage in the entrance to the tidal channel in the terminal project area at high tide, albeit infrequently and in low numbers (if at all) given the shallow and narrow nature of aquatic habitat within this area.                                                                                                                                                                                                                                     |

| Name                                                                     | *Status    | Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                              | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| White sturgeon<br>( <i>Acipenser transmontanus</i> )                     | SC, CSSC   | Spawns in large river systems such as the Sacramento River; forages in nearshore oceanic waters, bays, and estuaries.                                                                                                                                                                                                                                                                                                                                | Absent as Breeder. This species occurs in tidal waters of the South San Francisco Bay as well as streams throughout the project region. However, this species is not known to spawn in the area, and is only expected to occur within Redwood Creek, Westpoint Slough, and the open Bay as a forager.                                                                                                                                                                                                                                            |
| California red-legged frog<br>( <i>Rana draytonii</i> )                  | FT, CSSC   | Streams, freshwater pools, and ponds with emergent or overhanging vegetation. May use the undersides of old boards and other debris to rest or aestivate within riparian areas.                                                                                                                                                                                                                                                                      | Absent. California red-legged frogs are known to occur approximately 5.9 miles south of the terminal project area in the Atherton Canal (CNDDDB 2025). However, no suitable aquatic breeding or dispersal habitat is present on or surrounding the terminal project area, and intensive development and numerous roadways between areas of known occurrence and the terminal project area preclude dispersal to the terminal project area. Thus, California red-legged frogs are determined to be absent from the terminal project area.         |
| San Francisco garter snake<br>( <i>Thamnophis sirtalis tetrataenia</i> ) | FE, SE, SP | Prefer densely-vegetated ponds with an open water component near open hillsides where they can sun themselves, feed, and find cover in rodent burrows (Larsen 1994 as cited in USFWS 2007). May also occupy ponds or pools in or next to streams, streams, lakes, and reservoirs. The species prefers a dense cover of vegetation, such as willows ( <i>Salix</i> spp.), bulrushes ( <i>Schoenoplectus</i> spp.), and cattails ( <i>Typha</i> spp.). | Absent. The San Francisco garter snake occurs at very few locations in San Mateo County. The only known population of San Francisco garter snakes on the east side of the San Francisco peninsula occurs near the San Francisco International Airport, approximately 11.5 miles to the northwest. No suitable habitat for this species is present in the terminal project area, and the terminal project area is isolated from the nearest known remaining populations by extensive urbanization. Thus, this species is determined to be absent. |
| Western snowy plover<br>( <i>Anarhynchus nivosus nivosus</i> )           | FT, CSSC   | Sandy beaches on marine and estuarine shores and salt pannes in San Francisco Bay saline managed ponds.                                                                                                                                                                                                                                                                                                                                              | May be Present. No suitable habitat is present in the project area. However, the species was formerly known to breed on Bair Island, and may utilize remnant salt panne and oyster shell beaches adjacent to the ferry routes for foraging and possibly nesting. Snowy plovers are known to breed, roost and forage near the terminal project area at Cargill Inc.'s Redwood City Salt Ponds and the Refuge's Ravenswood Ponds, located 0.4 and 2.9 miles from the terminal project area, respectively.                                          |

| Name                                                               | *Status    | Habitat                                                                                                                                                                                                                                         | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| California least tern<br>( <i>Sternula antillarum browni</i> )     | FE, SE, SP | Nests along the coast on bare or sparsely vegetated, flat substrates. In San Francisco Bay, nests primarily on an old airport runway at the former Alameda Naval Air Station and former salt ponds in Hayward. Forages for fish in open waters. | Absent as Breeder. Least terns are not known or expected to nest on or adjacent to the project area, and this species does not currently nest in San Mateo County. Least terns occasionally forage over open water habitat along the San Mateo shoreline, including at Coyote Point and the Refuge's Ravenswood Ponds, 8 miles northwest and 2.9 miles southeast of the terminal project area, respectively. They likely forage in small numbers in open waters of the Bay along the ferry routes, and could possibly forage in Redwood Creek and Westpoint Slough in the terminal project area. However, no suitable nesting habitat is present on or near the terminal project area, and the closest known breeding colony occurs at Eden Landing Ecological Reserve, 7.5 miles north of the terminal project area. The tidal mouth of the tidal channel is too shallow to provide suitable foraging habitat for this species. |
| Tricolored blackbird<br>( <i>Agelaius tricolor</i> )               | ST, CSSC   | Nests near fresh water in dense emergent vegetation.                                                                                                                                                                                            | Absent as Breeder. Tricolored blackbirds typically nest in extensive stands of tall emergent herbaceous vegetation in non-tidal freshwater marshes and ponds, which are not present in the project area. This species is not known to nest in tidal habitats along the Bay, and has not been recorded nesting in the project vicinity. However, individuals could occasionally forage in the terminal project area during the nonbreeding season (albeit irregularly and in low numbers).                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| California Ridgway's rail<br>( <i>Rallus obsoletus obsoletus</i> ) | FE, SE, SP | Salt marsh habitat dominated by pickleweed and cordgrass.                                                                                                                                                                                       | Present. The California Ridgway's rail is resident in salt marsh habitat in San Mateo County, particularly where broader areas of well-developed tidal salt marsh are present. The species is present in both Bair Island and Greco Island directly across from the terminal project area and along the ferry routes (CNDDDB 2025). However, no marsh habitat suitable for breeding occurs on or adjacent to the terminal project area. Occasional dispersing individuals could possibly forage in the small areas of tidal salt marsh found in the northwest corner of the terminal project area and entrance to the tidal channel, though the lack of refugia in these areas would not attract rails to linger there, and this species may not occur in the terminal project area at all.                                                                                                                                      |

| Name                                                                    | *Status    | Habitat                                                                                                                                                                              | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| California black rail<br>( <i>Laterallus jamaicensis coturniculus</i> ) | ST, SP     | Breeds in fresh, brackish, and tidal salt marsh.                                                                                                                                     | Present. Although few black rails have been observed in marshes on the east side of the San Francisco peninsula, they have been observed during the breeding season within Bair Island along the ferry routes (CNDDDB 2025, OEI 2022). This species may also be present at Greco Island along the ferry routes. Occasional dispersants could possibly forage in the small areas of tidal salt marsh found in the northwest corner of the terminal project area and entrance to the tidal channel, though the lack of refugia in these areas would not attract rails to linger there, and this species may not occur in the terminal project area at all.                                                                                   |
| Burrowing owl<br>( <i>Athene cunicularia</i> )                          | SC, CSSC   | Nests and roosts in open grasslands and ruderal habitats with suitable burrows, usually those made by California ground squirrels ( <i>Spermophilus beecheyi</i> ).                  | Absent as a breeder. This species formerly regularly nested at Bair Island, and although there is now less suitable habitat due to tidal marsh restoration, this species may still occur as an occasional breeder and forager in remaining upland habitat in the interior of Outer Bair Island, outside of the project area. No California ground squirrel burrows were observed on-site, and no other suitable nesting or foraging habitat is present on or immediately adjacent to the terminal project area, but the species could occur as an occasional forager in the northern and western edges of the terminal project area during the non-breeding season.                                                                        |
| Salt marsh harvest mouse<br>( <i>Reithrodontomys raviventris</i> )      | FE, SE, SP | Diked and tidal wetlands supporting a mix of halophytic vegetation including common pickleweed, alkali heath ( <i>Frankenia salina</i> ), and fat hen ( <i>Atriplex prostrata</i> ). | Present. This species is present in both Bair Island and Greco Island along the ferry routes (CNDDDB 2025). It formerly occurred directly adjacent to the terminal project area, but after development of this parcel into the Pacific Shores Center in the late 1990s, there is no longer suitable habitat (CNDDDB 2025). Individuals dispersing from Bair Island or Greco Island could possibly forage in the small areas of tidal salt marsh found in the northwest corner of the terminal project area, entrance to the tidal channel, or within the tidal channel, however the lack of extensive refugia in these areas do not provide suitable breeding habitat, and this species may not occur in the terminal project area at all. |

| Name                                                                          | *Status           | Habitat                                                                                                                                                                                                                      | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>California Species of Special Concern</b>                                  |                   |                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Pacific lamprey<br>( <i>Entosphenus tridentatus</i> )                         | CSSC              | Occupies anadromous habitat in large streams entering the San Francisco and San Pablo Bays. Spawns in cool (shaded), clear, slow-moving rivers and streams supporting gravel, silt, and sand substrates (Moyle et al. 2015). | May be Present. In San Mateo County, the Pacific lamprey was historically documented in San Mateo Creek, approximately 6.8 miles northwest of the terminal project area (Goodman and Reid 2017) but is no longer considered to be present likely due to an impassible barrier (Crystal Springs Dam). In the project vicinity, they are currently known from the Alameda Creek watershed, approximately 5.2 miles northeast of the terminal project area (Goodman and Reid 2017), and San Francisquito Creek, approximately 5.9 miles southeast of the terminal project area (CalFish 2014). Pacific lamprey adults may infrequently forage in Redwood Creek, Westpoint Slough, and open Bay waters along the ferry routes, but no suitable spawning habitat is present on or immediately adjacent to the project area. This species may occasionally forage within the mouth of the tidal channel at high tide, albeit infrequently and in low numbers (if at all) given the shallow and narrow nature of aquatic habitat within the channel mouth. |
| Central Valley fall-run Chinook Salmon<br>( <i>Oncorhynchus tshawytscha</i> ) | CSSC              | Cool rivers and large streams that reach the ocean and that have shallow, partly shaded pools, riffles, and runs.                                                                                                            | May be Present. Central Valley fall-run Chinook salmon occur in San Francisco Bay, and small numbers of juveniles or fall-run adults may be present as occasional foragers in Redwood Creek, Westpoint Slough, and the open waters of the Bay along the ferry routes. However, no suitable spawning habitat for this species is present on or adjacent to the terminal project area. This species may occasionally forage within the mouth of the tidal channel in the terminal project area at high tide, albeit infrequently and in low numbers (if at all) given the shallow and narrow nature of aquatic habitat within the channel.                                                                                                                                                                                                                                                                                                                                                                                                            |
| Northern harrier<br>( <i>Circus cyaneus</i> )                                 | CSSC<br>(nesting) | Nests in marshes and moist fields, forages over large open areas.                                                                                                                                                            | Present. No suitable nesting or foraging habitat is present in the terminal project area, however both Bair Island and Greco Island along the ferry routes provide an abundance of both nesting and foraging habitat. Determined to be present.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Name                                                  | *Status           | Habitat                                                                                                                                                                                                                                                                                                                                                            | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Long-eared owl<br>( <i>Asio otus</i> )                | CSSC<br>(nesting) | Frequents dense riparian and live oak thickets near meadow edges, and nearby woodland and forest habitats, but also may be found in dense conifer stands at higher elevations. This species forages over open areas, where it hunts for rodents and small birds. Breeds from valley foothill hardwood up to ponderosa pine habitats from early March to late July. | Absent. This species is not expected to visit or breed in the project area or in the nearby vicinity of the project area. Determined to be absent.                                                                                                                                                                                                                                                                                                                                                                                            |
| Short-eared owl<br>( <i>Asio flammeus</i> )           | CSSC<br>(nesting) | Found in open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands. Breeds on the ground in dry areas with dense vegetation from early March through July.                                                                                                             | Absent as Breeder. This species formerly nested in grasslands at Bair Island along the ferry routes, but has not been documented since 1994, and may have been extirpated due to predation by red fox (Roberson 2008). No other breeding locations in the San Francisco Bay are currently known. Non-breeding dispersants are occasionally present in Bair Island and Greco Island during the winter (CNDDDB 2025). However, this species is not expected in the terminal project area due to lack of suitable roosting and foraging habitat. |
| Vaux's swift<br>( <i>Chaetura vauxi</i> )             | CSSC<br>(nesting) | Nests in snags in coastal coniferous forests or, occasionally, in chimneys; forages aerially.                                                                                                                                                                                                                                                                      | Absent as Breeder. No suitable nesting habitat is present on or in the vicinity of the terminal project area. However, this species forages over the project area during migration.                                                                                                                                                                                                                                                                                                                                                           |
| Olive-sided flycatcher<br>( <i>Contopus cooperi</i> ) | CSSC<br>(nesting) | Breeds in mature forests with open canopies, along forest edges in more densely vegetated areas, in recently burned forest habitats, and in selectively harvested landscapes (Altman and Sallabanks 2000, Robertson and Hutto 2007).                                                                                                                               | Absent as Breeder. No suitable nesting habitat is present in the terminal project area or in the vicinity of the terminal project area. May occur as an occasional spring and fall migrant.                                                                                                                                                                                                                                                                                                                                                   |

| Name                                                                        | *Status           | Habitat                                                                                      | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| San Francisco common yellowthroat<br>( <i>Geothlypis trichas sinuosa</i> )  | CSSC              | Nests in herbaceous vegetation, usually in wetlands or moist floodplains.                    | Present. This species is present year-round in dense emergent vegetation in Bair Island and Greco Island along the ferry routes. No suitable nesting habitat is present in the terminal project area, as vegetation along Redwood Creek, Westpoint Slough, and the tidal channel in the northeast corner of the terminal project area is not sufficiently extensive and lacks suitable structure to support this species. May occur as an occasional nonbreeding visitor in the terminal project area. |
| Yellow warbler<br>( <i>Setophaga petechia</i> )                             | CSSC<br>(nesting) | Nests in riparian habitat, especially that dominated by cottonwoods, willows, and sycamores. | Absent as Breeder. No suitable nesting habitat is present on or adjacent to the terminal project area or ferry routes. May occur as a spring and fall migrant in the terminal project area.                                                                                                                                                                                                                                                                                                            |
| Alameda song sparrow<br>( <i>Melospiza melodia pusillula</i> )              | CSSC              | Nests in salt marsh, primarily in marsh gumplant and cordgrass along channels.               | Present. This species is present at both Bair Island and Greco Island along the ferry routes. Although there is no suitable nesting habitat in the terminal project area, this species may occur as an occasional forager along Redwood Creek, Westpoint Slough, and the tidal channel where there is suitable vegetation from which to forage. During the June 20, 2024 site visit, one individual was observed perched on ruderal vegetation near the mouth of the tidal channel.                    |
| Bryant's savannah sparrow<br>( <i>Passerculus sandwichensis alaudinus</i> ) | CSSC              | Nests in pickleweed dominant salt marsh and adjacent ruderal habitat.                        | Present. This species is present at both Bair Island and Greco Island along the ferry routes. There is marginally suitable nesting habitat in the terminal project area in ruderal vegetation above the banks of the tidal channel and mouth. This species may also occur as an occasional forager in the tidal salt marsh found in the northwest corner of the terminal project area and ruderal vegetation in the terminal project area.                                                             |

| Name                                                                        | *Status | Habitat                                                                                                                                         | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Pallid bat<br>( <i>Antrozous pallidus</i> )                                 | CSSC    | Forages over many habitats; roosts in caves, rock outcrops, buildings, and tree crevices or cavities.                                           | Absent as Breeder. Historically, pallid bats were likely present in a number of locations throughout the project region, but their populations have declined in recent decades. This species has been extirpated as a breeder from urban areas close to the Bay, and is not expected to breed in the terminal project area. Crevices in trees in the terminal project area are too small to provide roost sites for this large bat, and if it occurs in the project area at all, it would do so only in low numbers, as an occasional dispersant briefly foraging on or over the site. |
| Townsend's big-eared bat<br>( <i>Corynorhinus townsendii</i> )              | CSSC    | Roosts in caves, mine tunnels, and occasionally in deep crevices in trees such as redwoods or in abandoned buildings, in a variety of habitats. | Absent. No known extant populations of the Townsend's big-eared bat occur in the site vicinity, and no suitable cavernous roosting habitat is present in the terminal project area. Determined to be absent.                                                                                                                                                                                                                                                                                                                                                                           |
| Western red bat<br>( <i>Lasiurus blossevillei</i> )                         | CSSC    | Roosts in foliage in forest or woodland habitat, especially in or near riparian habitat.                                                        | Absent as Breeder. This species may occur as a migrant and winter resident, but does not breed in the Bay Area. It is possible that an occasional bat may roost temporarily within foliage of trees in the terminal project area, but due to the absence of riparian woodland habitat on or in the vicinity of the terminal project area, and lack of observations of this species in the project vicinity (CNDDDB 2025; iNaturalist 2025), occurrence is unlikely.                                                                                                                    |
| San Francisco dusky-footed woodrat<br>( <i>Neotoma fuscipes annectens</i> ) | CSSC    | Nests in a variety of habitats including riparian areas, oak woodlands, and scrub.                                                              | Absent. The terminal project area and ferry routes lack suitable habitat for this species, and due to the heavily urbanized nature of the surrounding areas this species does not likely occur in the project area. Determined to be absent.                                                                                                                                                                                                                                                                                                                                           |
| Salt marsh wandering shrew<br>( <i>Sorex vagrans halicoetes</i> )           | CSSC    | Medium-high marsh 6-8 feet above sea level with abundant driftwood and common pickleweed.                                                       | Present. This species is likely present in Bair Island and Greco Island adjacent to the ferry routes, although its distribution is poorly known. Individuals dispersing from Bair Island or Greco Island could possibly forage in the small areas of tidal salt marsh found in the northwest corner of the terminal project area, entrance to the tidal channel, or within the tidal channel, however the lack of extensive refugia in these areas do not provide suitable breeding habitat, and this species may not occur in the terminal project area at all.                       |

| Name                                                       | *Status | Habitat                                                                                                                                                                                                                                                                                  | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Northwestern pond turtle<br>( <i>Actinemys marmorata</i> ) | CSSC    | Permanent or nearly permanent water in a variety of habitats with abundant emergent or riparian vegetation. Females lay eggs in upland habitats, in clay or silty soils in unshaded (often south-facing) areas (Jennings and Hayes 1994).                                                | Absent. The closest known occurrence of northwestern pond turtle is a single individual located approximately 5.5 miles northwest of the terminal project area in Foster City near Seal Slough (iNaturalist 2025). A larger population is found 6.7 miles west of the site at Crystal Springs Reservoir (CNDDDB 2025). The terminal project area is separated from these observations by dense urban development, including several highways, and the project area does not provide suitable habitat. Determined to be absent.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>California Fully Protected Species</b>                  |         |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| White-tailed kite<br>( <i>Elanus leucurus</i> )            | SP      | Nests in tall shrubs and trees, forages in grasslands, marshes, and ruderal habitats.                                                                                                                                                                                                    | Present. This species was known to breed on Bair Island prior to tidal marsh restoration (CNDDDB 2025). This species regularly occurs as a forager on Bair Island and Greco Island adjacent to the ferry routes, and may occasionally nest on Bair Island where suitably tall shrubs remain, outside of the project area. No suitable nesting or foraging habitat is present in the terminal project area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Other Sensitive Species</b>                             |         |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Pacific herring<br>( <i>Clupea pallasii</i> )              | CEQA    | Spawns in sheltered areas of bays, estuaries, and harbors, and sometimes in nearshore coastal waters. Eelgrass often used as a spawning substrate where present. May spawn in intertidal or subtidal waters on manmade structures such as pier pilings and riprap (Watters et al. 2004). | May be Present. Pacific herring regularly spawn approximately 8 miles northwest of the project area at Coyote Point and elsewhere in the San Francisco Bay (CDFW 2019b), including on rare occasion at Bair Island (CDFW 2000). Notably, between 2012-2020 the closest that this species was documented to breed was at Little Coyote Point, approximately 5.2 miles northwest of the project area (CDFW 2023). Although unlikely, this species could possibly spawn in small numbers on the abandoned wharf, rock, and riprap found along Redwood Creek and Westpoint Slough. Forages in Redwood Creek and Westpoint Slough adjacent to the project area, and in the open bay along the ferry routes. This species may occasionally forage within the mouth of the tidal channel in the northeast corner of the project area at high tide, albeit infrequently and in low numbers (if at all) given the shallow and narrow nature of aquatic habitat within the channel. |

| Name                                                       | *Status | Habitat                                                                                                                                                               | Potential for Occurrence in the Project Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Olympia oyster<br>( <i>Ostrea lurida</i> )                 | CEQA    | Attaches to hard substrates such as rocks, and artificial structures in intertidal habitats of the San Francisco Bay. May also occur in subtidal habitats.            | May be Present. Occurs throughout the San Francisco Bay along rocky shorelines, including two occurrences of 1-2 oysters in Redwood Creek near the project area (iNaturalist 2025). The shoreline adjacent to the project area provides limited habitat due to the general lack of hard substrates located at mean lower low water (MLLW) where oysters prefer to live. The abandoned wharf on Westpoint Slough and riprap along Redwood Creek and Westpoint Slough provide marginally suitable habitat, therefore, this species could occur in the project area.                                                                     |
| California sea lion<br>( <i>Zalophus californianus</i> )   | MMPA    | Occurs in shallow waters along the eastern North Pacific Ocean and in portions of the San Francisco Bay. Prefers sandy beaches, rocky shorelines, and floating docks. | Present. Does not breed inside San Francisco Bay, and is not expected to haul out on the shoreline in the terminal project area. Regularly occurs along the ferry routes in the open bay, and occasionally is found in Redwood Creek and Westpoint Slough. The mouth of the tidal channel in the northeast corner of the terminal project area is too small for use by this species, but it could occur in open water/tidal aquatic habitat where the floating dock would be constructed and in adjacent portions of Redwood Creek and Westpoint Slough.                                                                              |
| Pacific harbor seal<br>( <i>Phoca vitulina richardsi</i> ) | MMPA    | Throughout the northern Atlantic and Pacific Oceans along coastal waters, river mouths, and bays.                                                                     | Present. Harbor seals are permanent residents of the San Francisco Bay. Pupping and haul-out sites are found on Outer Bair Island and Corkscrew Slough between Middle and Outer Bair Island. This species is not expected to haul out on the shoreline in the terminal project area. Occurs in Redwood Creek and Westpoint Slough along the ferry routes and adjacent to the terminal project area. The tidal channel mouth is too small for use by this species, but it could occur in open water/tidal aquatic habitat where the floating dock would be constructed and in adjacent portions of Redwood Creek and Westpoint Slough. |

#### SPECIAL-STATUS SPECIES CODE DESIGNATIONS

|    |   |                               |
|----|---|-------------------------------|
| FE | = | Federally listed Endangered   |
| FT | = | Federally listed Threatened   |
| FC | = | Federal Candidate for listing |
| SE | = | State listed Endangered       |
| ST | = | State listed Threatened       |

SC = State Candidate for listing  
CSSC = California Species of Special Concern  
SP = State Fully Protected Species  
MMPA = Marine Mammal Protection Act  
CEQA = Species not currently protected by statute or regulation, but considered endangered, rare, or threatened under Section 15380 of the CEQA Guidelines.

## 5.3 Sensitive Natural Communities, Habitats, and Vegetation Alliances

Natural communities have been considered part of the Natural Heritage Conservation triad, along with plants and animals of conservation significance, since the state inception of the Natural Heritage Program in 1979. The CDFW determines the level of rarity and imperilment of vegetation types and tracks sensitive communities in its Rarefind database (CNDDDB 2025). Global rankings (G) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas state (S) rankings reflect the condition of a habitat within natural communities and are defined using NatureServe's standard heritage program methodology as follows (Faber-Langendoen et al. 2012):

- G1/S1: Critically imperiled
- G2/S2: Imperiled
- G3/S3: Vulnerable
- G4/S4: Apparently secure
- G5/S4: Secure

In addition to tracking sensitive natural communities, the CDFW also ranks vegetation alliances, defined by repeating patterns of plants across a landscape that reflect climate, soil, water, disturbance, and other environmental factors (Sawyer et al. 2009). If an alliance is marked G1–G3, all of the vegetation associations within it will also be of high priority (CDFW 2025). The CDFW provides VegCAMP's currently accepted list of vegetation alliances and associations (CDFW 2025). Impacts on CDFW sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies, and regulations, must be considered and evaluated under CEQA (Title 14, Division 6, Chapter 3, Appendix G of the California Code of Regulations). Furthermore, aquatic, wetland, and riparian habitats are also protected under applicable federal, state, or local regulations, and are generally subject to regulation, protection, or consideration by the USACE, RWQCB, CDFW, and/or the USFWS.

**Sensitive Natural Communities.** A query of sensitive habitats in the CNDDDB (2025) identified four sensitive natural communities as occurring within the nine 7.5-minute USGS quadrangles containing or surrounding the terminal project area: (1) northern coastal salt marsh (Rank G3/S3.2), (2) serpentine bunchgrass (Rank G2/S2.2), (3) valley needlegrass grassland (Rank G3/S3.1), and (4) valley oak woodland (Rank G3/S2.1). Northern coastal salt marsh is characterized by Holland (1986) as occurring along sheltered inland margins of bays, often co-dominated by pickleweed, cordgrass, and sometimes saltgrass. The tidal salt marsh in the terminal project area, along the tidal channel and in the northern wetland, is dominated by pickleweed, and saltgrass in various areas, and therefore represents northern coastal salt marsh. Additionally, Bair and Greco Islands contain northern coastal salt marsh. The other sensitive habitats recorded in the region by CNDDDB (serpentine

bunchgrass, valley needlegrass grassland, and valley oak woodland) are all absent from the terminal project area and Bair and Greco Islands.

**Sensitive Vegetation Alliances.** Much of the northern coastal salt marsh in the terminal project area qualifies as a *Sarcocornia pacifica* (*Salicornia depressa*) (Pickleweed mats) Alliance (CDFW 2025). This alliance is ranked as G4/S3; globally it is “apparently secure”, but on a state-wide level it is “vulnerable” (S3), and therefore would be considered by CDFW as sensitive natural community.

**Sensitive Habitats (Wetlands and Waters of the U.S./State).** The June 20, 2024 site visit identified waters of the U.S. and waters of the State on and adjacent to the project area. Redwood Creek, Westpoint Slough, the tidal channel, narrow areas of tidal wetlands along these features, and the tidal salt marsh in the northern part of the project area are all considered waters of the U.S. and waters of the State. Waters of the State may additionally extend landward to the tops of the banks of the tidal channel. The ruderal slope along the tidal channel and muted tidal marsh banks may be considered a “buffer” of waters of the State by the RWQCB. The bed and banks of Redwood Creek, and possibly also Westpoint Slough if it is considered the downstream reach of a stream that begins in nontidal areas, may also be regulated by the CDFW under Section 1602 of the California Fish and Game Code.

**Essential Fish Habitat.** As discussed in Section 3.1.5, the intertidal and subtidal habitats within and adjacent to the terminal project area and ferry routes are considered EFH by the NMFS. EFH is habitat that is essential to the long-term survival and health of a fishery and includes those habitats that support all life stages and all habitats that support breeding, spawning, feeding, and growth to maturity of a managed species. The San Francisco Bay has been designated EFH for three FMPs within the project vicinity: the Pacific Coast Groundfish, Coastal Pelagic Species, and Pacific Coast Salmon. Of the 89 species federally managed under these plans, the following fourteen are expected to occur in the South-Central Bay and South Bay (i.e., Bay Bridge to south of the San Mateo Bridge) based on NMFS’s evaluation of FMP species distributions in San Francisco, San Pablo, and Suisun Bays (NMFS 2013). These are the northern anchovy and Pacific sardine of the Coastal Pelagic Species FMP; leopard shark (*Triakis semifasciata*), soupfin shark (*Galeorhinus galeus*), spiny dogfish (*Squalus acanthias*), big skate (*Raja binoculata*), lingcod (*Ophiodon elongatus*), brown rockfish (*Sebastes auriculatus*), English sole (*Parophrys vetulus*), sand sole (*Psettichthys melanostictus*), starry flounder, cabezon (*Scorpaenichthys marmoratus*) of the Pacific Coast Groundfish FMP; and Chinook salmon and Central California Coast steelhead of the Pacific Coast Salmon FMP.

In the terminal project area, intertidal habitats along Redwood Creek, Westpoint Slough, and the tidal channel up to the elevation of mean higher high water are considered to be EFH. FMP-managed fish species forage along both Redwood Creek and Westpoint Slough, which provide nursery habitat in adjacent marshes, and may occasionally forage at the mouth of the tidal channel during high tide. However, due to the very narrow and shallow nature of the tidal channel mouth, FMP-managed fish are expected to make limited use of the tidal channel mouth.

## Section 6. Impacts and Mitigation Measures

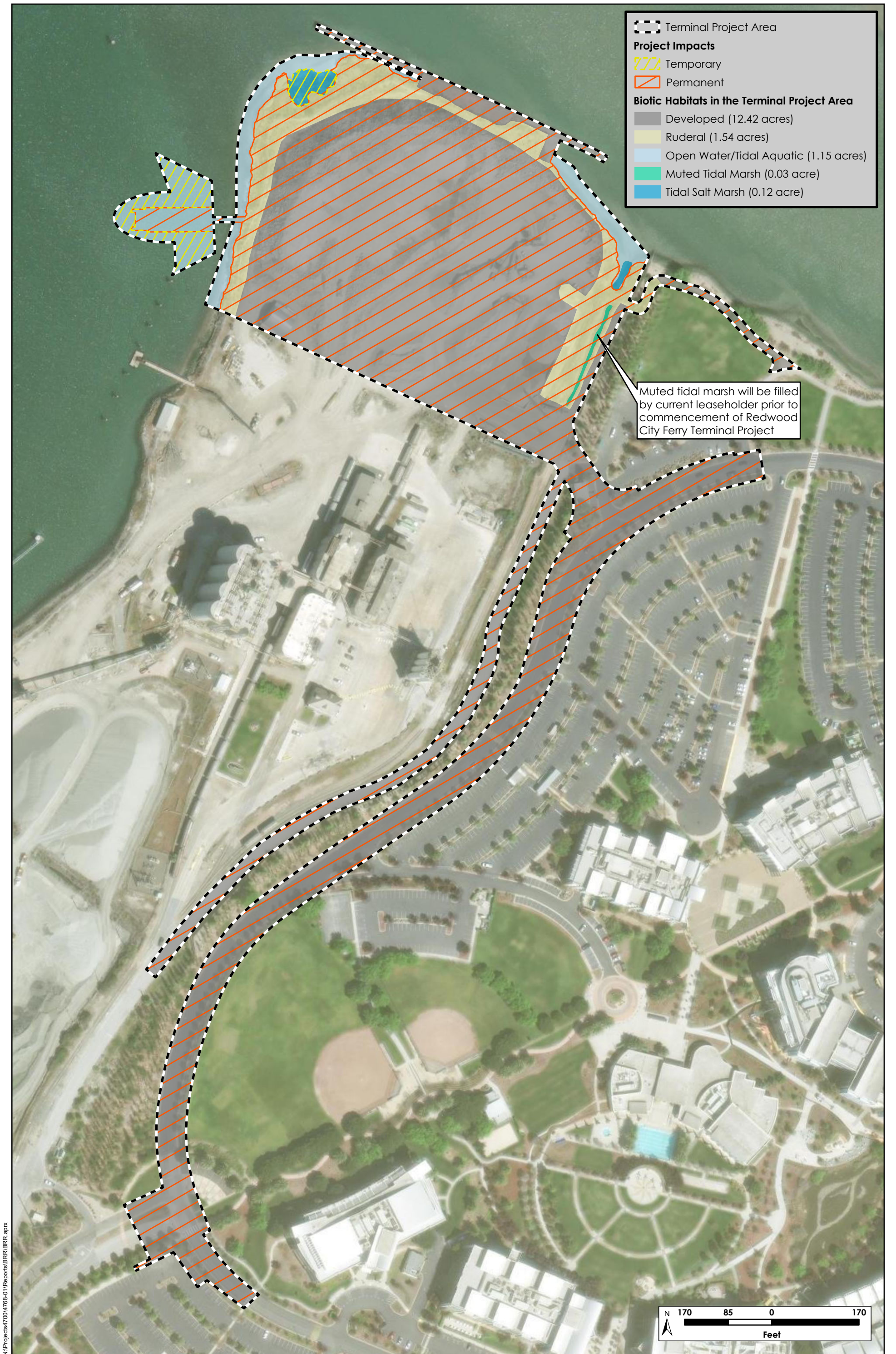
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CEQA and the State CEQA Guidelines provide guidance in evaluating impacts of projects on biological resources and determining which impacts will be significant. The Act defines “significant effect on the environment” as “a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.”

Appendix G of State CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the project would:

- A. “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”
- B. “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”
- C. “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”
- D. “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”
- E. “conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance”
- F. “conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan”

Potential impacts on biological resources as a result of the proposed project were systematically evaluated at the project level. These impacts were first evaluated to qualitatively describe how proposed project activities could impact biological resources, and whether impacts would be temporary (i.e., occurring only during project construction and the period immediately following) or permanent. Figure 7 identifies the biotic habitats in the terminal project area and depicts the areas that would be impacted by project activities. Direct impacts to habitats in the terminal project area (acreage of permanent and temporary impacts) are summarized in Table 3.



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Ecological Consultants

**Figure 7. Project Impacts**

Redwood City Ferry Terminal Project Biological Resources Report (4768-01)  
August 2026

**Table 3. Impacts to Biotic Habitats**

| <b>Biotic Habitat</b>          | <b>Permanent Impacts (acres)</b> | <b>Temporary Impacts (acres)</b> |
|--------------------------------|----------------------------------|----------------------------------|
| Developed                      | 11.860                           | 0                                |
| Ruderal                        | 1.540                            | 0                                |
| Open Water/Tidal Aquatic       | 0.180                            | 0.390                            |
| Tidal Salt Marsh <sup>1</sup>  | 0.001                            | 0.099                            |
| Muted Tidal Marsh <sup>2</sup> | 0.030                            | 0                                |
| <b>Total Impacts</b>           | <b>13.611</b>                    | <b>0.489</b>                     |

<sup>1</sup> Temporary and permanent impacts on tidal salt marsh total 0.10 acre. Mitigation for impacts to tidal salt marsh that would be impacted by the Ferry Terminal project has already been provided by the Pacific Shores Project (see Section 6.3)

<sup>2</sup> The area mapped as muted tidal marsh will be filled/piped by others prior to commencement of the Ferry Terminal project.

## **6.1 Impacts on Special-Status Species: 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 CDFW or USFWS (Less than Significant with Mitigation)**

### **6.1.1 Impacts on Special-Status Plant Species (No Impact)**

As discussed in Section 5.1, no special-status plant species are known or expected to occur in the terminal project area. California seablite and Point Reyes bird's beak could possibly occur on Bair Island and Greco Island along the ferry route. However, as described in Section 1.2.3, ferry operation at a speed of 7 knots or less within Redwood Creek would prevent wave runoff and associated marsh erosion, so the project would have no direct or indirect impacts on special-status plants.

### **6.1.2 Impacts on Special-Status Fish, Designated Critical Habitat, and Essential Fish Habitat (Less than Significant with Mitigation)**

Construction activities that would occur within aquatic habitats include installation of pilings and a float, removal of the abandoned cement Shell Unloading Wharf, and dredging within Redwood Creek. These activities would result in temporary and permanent impacts to tidal salt marsh and open water/tidal aquatic habitat.

Redwood Creek, Westpoint Slough, and the open Bay provide high-quality habitat for fish, and there is the potential for special-status fish such as the longfin smelt, Central California Coast steelhead, Central Valley fall-run Chinook salmon, white sturgeon, southern green sturgeon, Pacific lamprey, and for a number of FMP-managed fish species, to occur within the in-water work areas when construction occurs. Installation of pilings and a float (approximately 20 days), removal of the abandoned cement Shell Unloading Wharf (approximately

10 days), and dredging from the Redwood Creek Channel to the ferry dock (approximately 11 days) have the potential to result in injury to special-status fish due to in-water vibration; a reduction in water quality in Redwood Creek, Westpoint Slough, and the open Bay due to mobilization of sediments or contaminants (e.g., leaks from construction equipment) during construction; and loss of a limited area of fish habitat.

During construction, the project would comply with the Construction General Permit (see Section 3.2.5), which includes preparation of a SWPPP that identifies construction best management practices (BMPs) to protect water quality by preventing discharges of pollutants into surface waters and controlling erosion, sedimentation, and runoff. BMPs would achieve these goals through the use of, for example, silt fencing or other types of sediment controls, dust control, and temporary soil stabilization. These construction BMPs would be reviewed and coordinated with the RWQCB, as necessary, for implementation during work and may include but are not limited to the following:

- Sedimentation minimization measures would be in place prior to the onset of project construction and would be monitored and maintained until construction activities have been completed. Temporary stockpiling of excavated or imported material would occur only in approved construction staging areas. Stockpiles that are to remain in the terminal project area throughout the wet season would be protected to prevent erosion. At no time would sediment-laden water be allowed to enter Redwood Creek, Westpoint Slough, or the tidal channel in the eastern part of the terminal project area.
- No litter, debris, or sediment would be dumped into storm drains.
- Equipment staging and parking of vehicles would occur on established access roads and flat surfaces.
- The integrity and effectiveness of construction fencing and erosion control measures would be inspected on a daily basis. Corrective actions and repairs would be carried out immediately for fence breaches and ineffective BMPs.
- Fueling, washing, and maintenance of vehicles would occur in developed habitat, away from Redwood Creek, Westpoint Slough, and the tidal channel in the eastern part of the terminal project area. Equipment would be regularly maintained to avoid fluid leaks. Any leaks would be captured in containers until equipment is moved to a repair location. Hazardous materials would be stored only within the developed habitat. Containment and cleanup plans would be prepared and put in place for immediate cleanup of fluid or hazardous materials spills.
- Absorbent materials designated for spill containment and clean-up activities would be available on-site for use in an accidental spill.
- Use of bubble curtains to reduce underwater noise levels may also prevent sediment dispersion and resuspension.

Following construction, ferries operating in Redwood Creek could physically strike special-status fish such as white sturgeon, green sturgeon, steelhead, or Central Valley fall-run chinook salmon. However, these fish are present in very low numbers and/or irregularly in Redwood Creek given their low populations. Also, because the project includes ferry operation at a speed of 7 knots or less within Redwood Creek, these fish would be able to move out of the way because they would be able to hear the approaching ferry and would have ample time to react (De Robertis and Handegard 2013). Similarly, in areas where marine mammals are known to occur, NOAA Fisheries has established vessel speeds restrictions of 10 knots or less to reduce the potential for vessel collisions (NMFS 2026b). The probability and magnitude of impacts due to vessel strikes would be very low, and thus less than significant. Maintenance dredging for the proposed project from the navigation channel to the terminal and at the ferry berths would occur every 2-10 years, as required, to maintain ferry access to the dock, which may result in additional impacts to water quality. Thus, EFH and designated critical habitat for Central California Coast steelhead and southern green sturgeon would be impacted by dredging, an impact that would be significant due to its impacts on water quality and potential impairment of fish health.

Benthic macroinvertebrates and other marine organisms that are prey for fish could be killed or their abundance reduced when dredging occurs and fill occurs by pile installation. However, the areas to be dredged or filled are very limited relative to the amount of available prey in the surrounding tidal waters. Thus, the loss of aquatic prey species because of in-water work activities and fill would not have a significant impact on special-status fish. Likewise, the loss of critical habitat and EFH that would occur due to dredging and pile installation represents a minute fraction of available habitat in the Bay, and the loss of fish habitat would not be significant. Both Pacific herring and Olympia oyster are known to occasionally occur in the project vicinity, although observations of either species are very infrequent and limited to a small number of individuals. No Olympia oysters were observed during the June 20, 2024 site visit. Herring are not known to have spawned near the terminal project area since the 2015-2016 spawning season, when spawning occurred north of the San Mateo Bridge at Little Coyote Point, located approximately 5.2 miles north of the terminal project area (CDFW 2023). In the South Bay, Pacific herring spawning habitat is primarily man-made structures such as pilings and riprap (Watters et al. 2004), and Olympia oysters are found almost exclusively on pilings and riprap in the southern part of their range, including in the South Bay (NMFS 2026a). Impacts due to the proposed project would be negligible, as no more than 0.25 acre of pilings and riprap would be removed by the project, while 0.16 acre of pilings would be installed in the water to support the ferry float and would provide suitable habitat for herring spawning and oyster recruitment. Furthermore, there are regional efforts to restore habitat to support both species, such as the State Coastal Conservancy's San Francisco Bay Living Shoreline Program. An example of this work is the Near-shore Linkages Project, which was initiated in 2012 and included experimental treatment plots to restore 0.24 acre of eelgrass beds and oyster reefs at a location owned by The Nature Conservancy in San Rafael and offshore from CDFW's Eden Landing Ecological Reserve in Hayward (SCC 2012). More recently, the Port of San Francisco completed construction of the Heron's Head Park Shoreline Resilience Project, which included oyster reef restoration (SFBRA 2023). Lastly, the Port of Redwood City will soon begin construction on its own Living Shoreline Pilot Project on Redwood Creek near the terminal project area. That project will include conversion of 180 linear feet of hardened shoreline to 0.015 acre of rocky intertidal habitat that will provide a substrate for Pacific herring to spawn and Olympia oysters to recruit (Port of Redwood City

2026). The net loss of potential (and low-quality) habitat for Pacific herring and Olympia oyster is very low, representing a very small proportion of regionally available habitat for these species. Furthermore, when considering that eelgrass and oyster reef restoration will continue to result in an increase in habitat to support Pacific herring and Olympia oysters relative to current conditions, the net loss of habitat for these two species as a result of the project would have a less than significant impact on these species.

The proposed project would remove an abandoned cement Shell Unloading Wharf located along the northeastern edge of the terminal project area, which would restore and enhance habitat to support fish. Removal of the wharf would allow more light to reach the water, creating more natural conditions that encourage fish to forage. The abandoned Shell Unloading Wharf removal would also allow for pickleweed and other northern coastal salt marsh vegetation to recolonize the shoreline, creating additional fish foraging habitat and cover from predators.

Nevertheless, the proposed project's overall impacts on special-status fish and fish managed under FMPs would be significant due to the potential for injury, mortality, or impairment of fish health during construction and maintenance dredging. Implementation of Mitigation Measures BIO-1 to BIO-4 would reduce impacts to special-status fish, designated critical habitat, and essential fish habitat to less-than-significant levels.

**Mitigation Measure BIO-1. Worker Environmental Awareness Training.** Prior to the start of in-water construction, personnel involved in in-water activities shall be trained by a qualified biologist (experienced in construction monitoring, as approved by USFWS and CDFW) in the importance of the marine environment to special-status fish and other aquatic animals and plants, and the environmental protection measures put in place to prevent impacts to these species, their habitats, and EFH. The training shall include, at a minimum, the following:

- A review of the special-status fish, other aquatic animals and plants, and sensitive habitats that could be found in or downstream from work areas
- Measures to avoid and minimize adverse effects to special-status fish, other aquatic animals and plants, their habitats, and EFH
- A review of all conditions and requirements of environmental permits, reports, and plans (e.g., USACE permits)

**Mitigation Measure BIO-2. Adherence to LTMS Measures and Seasonal Restrictions.** All dredging, pile driving, and other in-water construction activities shall adhere to the applicable measures and dredging work windows within the Long-Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region (LTMS). Thus, in-water work shall be conducted between September 1 through November 30, based on the standard work windows for steelhead, Pacific herring, longfin smelt, and California Ridgway's rail (because dredging may occur within 250 of tidal salt marsh) (LTMS 2021).

**Mitigation Measure BIO-3. Minimize Underwater Noise Impacts.** During construction, the following noise minimization and avoidance measures shall be implemented:

- All in-water work, including dredging, pile driving, and demolition, will be conducted between September 1 and November 30 when the likelihood of sensitive fish species being present in the work areas is minimal.
- To the extent feasible, all pilings shall be installed and removed with a vibratory pile driver hammer. As feasible, vibratory pile driving shall be conducted following the United States Army Corps of Engineers 2024 “U.S. Army Corps of Engineers Proposed Additional Procedures and Criteria for Permitting Projects under a Programmatic Determination of Not Likely to Adversely Affect Select Listed Species in California (the 2024 NLAA Program)” [USACE 2024]. If use of a vibratory pile drive hammer is infeasible due to the presence of dense clay or rock, and an impact hammer is needed to complete the driving of the steel pipe piles so they reach sufficient embedment to resist the lateral loads, the pile shall be driven as deep as possible with a vibratory hammer prior to the use of the impact hammer. Use of an impact hammer shall comply with all minimization and avoidance measures identified in this mitigation measure.
- An impact pile driver may only be used where necessary to complete installation of steel pilings that reach refusal prior to the design tip elevation using a vibratory pile hammer and all precast concrete piles in accordance with seismic safety or other engineering criteria. With implementation of the below specifications, use of an impact pile driver would result in less than significant impacts to special-status fish, designated critical habitat, and EFH.
  - If an impact pile driver is used, it will be cushioned using a 12-inch-thick wood cushion block to minimize noise.
  - A Hydroacoustic Monitoring Plan shall be prepared and approved by the Port of Redwood City to be implemented in the event that an impact hammer is used. The sound monitoring results will be made available to CDFW, NMFS, and USFWS.
    - The plan will provide detail on the sound attenuation system, and the methods used to monitor and verify sound levels during impact pile driving activities.
    - The plan will include the use of a bubble curtain during any impact pile driving of piles in the water. The bubble curtain will be operated in a manner consistent with the following performance standards:
      - The bubble curtain will distribute air bubbles around 100% of the piling perimeter for the full depth of the water column.
      - The lowest bubble ring will be in contact with the mudline for the full circumference of the ring, and the weight attached to the bottom ring shall ensure 100% mudline contact. No parts of the ring or other objects shall prevent full mudline contact.

- Air flow to the bubblers must be balanced around the circumference of the pile.
- A “soft start” technique shall be employed in all pile driving to give fish and other aquatic species an opportunity to vacate the area. When initiating pile driving, or when there has been downtime of 30 minutes or more without pile driving, the contractor will initiate the driving with ramp-up procedures described below.
  - For vibratory hammers, the contractor will initiate the driving for 15 seconds at reduced energy, followed by a 30-second waiting period. This procedure will be repeated two additional times before continuous driving is started.
  - For impact hammers, an initial set of three strikes shall be made by the hammer at 40% energy, followed by a 30-second waiting period, then two subsequent three-strike sets at 40% energy, with 30-second waiting periods, before initiating continuous driving.
  - A biological monitor shall be present during all pile driving to observe the work area before, during, and after pile driving. The monitor shall be present as specified by NMFS during the impact pile-driving phases of construction.
- If pile installation must occur at times other than the approved work window, the project applicant will obtain incidental take authorization from CDFW, NOAA, and USFWS, to address potential significant impacts on steelhead, Central Valley fall-run Chinook salmon, longfin smelt, and Pacific herring and implement all requested actions to avoid impacts. Incidental take authorization will require submitting a request for informal or formal consultation to CDFW, NOAA, and USFWS. If take authorization is obtained, the project must comply with the terms and conditions outlined in programmatic Biological Opinions (BO) by the LTMS and any additional mitigation measures prescribed by agencies.

**Mitigation Measure BIO-4. Minimize Dredging and Pile Driving Impacts.** During dredging activities occurring during both construction and operational maintenance, the following minimization and avoidance measures shall be implemented:

- All dredging shall be conducted between September 1 and November 30. If pile installation must occur at times other than the approved work window, the project applicant will obtain any necessary incidental take authorization, and will comply with required terms and conditions of the LTMS programmatic BOs.
- A Sediment Analysis Plan and testing of the sediments in the dredging area shall be conducted as required by the Dredged Material Management Office (DMMO) to ensure that sediment shall be disposed of safely. The Port shall utilize sediment analysis data from the on-going dredging within Redwood Creek, along the ferry routes and directly adjacent to the terminal project area. Preparation of a Sediment Analysis Plan and testing of the sediments in the proposed dredging area are currently required by the DMMO to ensure that dredged sediment can be safely disposed

of at a suitable location. The Sediment Analysis Plan prepared by the construction contractor shall be provided to the Port of Redwood City for approval (based on established DMMO standards<sup>3</sup>) prior to implementation.

- Impermeable silt curtains and/or gunderbooms, a tool similar to a silt curtain that is made of permeable material that allows water to flow through but traps sediment within the curtain, shall be used to contain sediments within a limited area until it resettles. They shall be monitored daily during active construction operations around the pile driving site to contain and minimize the spread of suspended sediments.
- Operational controls such as equipment design and monitoring shall be implemented for dredges to limit the amount of sediment released while dredging. These controls include:
  - Ensuring that buckets are properly sealed to prevent sediment leaks
  - Conducting regular visual inspections of turbidity barriers
  - Monitoring for turbidity during dredging operations
  - Using sealed barges or covers to transport materials
- Clamshell dredges with a bucket  $\leq 10$  cubic yards to reduce the occurrence of fish and mobile invertebrate entrainment.
- Baseline water quality assessments shall be conducted before pile driving begins to establish reference conditions. The construction contractor shall develop a Water Quality Monitoring Program to be reviewed and approved by the Port of Redwood City, and implemented to measure parameters such as turbidity, suspended solids, and contaminants in real-time during pile driving. Turbidity shall not increase more than 10% above natural levels in areas where natural turbidity is 50 Nephelometric Turbidity Units (NTU) or greater; suspended solids shall not increase in concentration so as to cause nuisance; and contaminants shall not increase in concentration so as to be detrimental to aquatic life (SFBRWB 2024). Construction operators shall adjust pile driving operations by adjusting deployment of turbidity curtains and changing the energy of pile driving operations based on monitoring results to ensure compliance with water quality standards set by the San Francisco Bay Regional Water Quality Control Board and as identified in the Port-approved Water Quality Monitoring Program.

With compliance with the SWPPP that would include implementation of standard construction BMPs to control erosion, sedimentation, and runoff and Mitigation Measures BIO-1 through BIO-4, impacts on fish and their habitats would be less than significant.

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<sup>3</sup> <https://www.sfei.org/projects/dredged-material-testing-thresholds-san-francisco-bay-area-sediments>

### **6.1.3 Impacts on Special-Status Marsh-Breeding Birds and Mammals (Less than Significant with Mitigation)**

Several special-status species are known to occur and breed in salt marshes or on beaches on Bair Island and Greco Island adjacent to the ferry routes and may occasionally occur within the project footprint as nonbreeding migrants, transients, or foragers. These are the California Ridgway's rail, California black rail, western snowy plover, San Francisco common yellowthroat, Alameda song sparrow, Bryant's savannah sparrow, northern harrier, white-tailed kite, salt marsh harvest mouse, and salt marsh wandering shrew.

The California Ridgway's rail is present year-round in Bair Island and Greco Island, where substantial populations occur (OEI 2024). The California black rail is less common on Bair Island and Greco Island but has been documented during the breeding season (OEI 2022). These species are unlikely to occur in the terminal project area due to the absence of suitable habitat; if they occur at all, they would do so as very infrequent dispersants that would not breed, and are unlikely even to forage, in the terminal project area due to the absence of suitable foraging habitat and cover. The western snowy plover may forage and breed on remnant salt panne and oyster shell beaches found on the northeast corner of Bair Island. This species may occasionally occur in the terminal project area as a forager during low tide when mudflats are exposed, but would not breed in the terminal project area due to lack of suitable habitat. Other avian California species of special concern, including the northern harrier, white-tailed kite, San Francisco common yellowthroat, Bryant's savannah sparrow, and Alameda song sparrow occur year-round on Bair Island and Greco Island. Marginal-quality breeding habitat for the Bryant's savannah sparrow is present in salt marsh and adjacent ruderal vegetation in the terminal project area, but otherwise no suitable breeding habitat for these species is present in the terminal project area, and these species may occur in the terminal project area primarily as nonbreeding visitors.

The salt marsh harvest mouse is known to occur in pickleweed marsh found in Bair Island and Greco Island. The distribution of the salt marsh wandering shrew is not well known, but it has similar habitat requirements to the salt marsh harvest mouse and is presumed to also be present in Bair Island and Greco Island. These species would be unlikely to occur in the terminal project area due to the absence of extensive pickleweed required for foraging, breeding, and cover from predation; if they occur at all, it would be as very infrequent dispersing individuals that would not breed, and are unlikely even to forage, in the terminal project area due to the absence of suitable foraging habitat and cover that these species depend upon for survival.

Project activities could result in some loss or disturbance of tidal salt marsh foraging habitats and could disturb foraging or roosting individuals of these species. Construction activities could result in a temporary direct impact through the alteration of foraging patterns (e.g., avoidance of work sites because of increased noise and activity levels during project construction) but would not result in the loss of individuals, as individuals of these species would be able to move away from any construction areas or equipment before they could be injured or killed. Further, the terminal project area does not provide high-quality foraging habitat used regularly or by large numbers of individuals of any of these species due to the limited extent and quality of tidal salt marsh in the terminal project area.

The USFWS typically recommends buffers of at least 700 feet, or at least 200 feet across a feature such as a major slough, between construction activity and California Ridgway's rail breeding habitat. The majority of project construction would occur well over 700 feet from tidal marsh where California Ridgway's rail breed. An approximately 150-foot section of the abandoned cement Shell Unloading Wharf on Westpoint Slough that would be removed is located approximately 640 feet from tidal marsh on Greco Island; however, due to the intervening slough separating construction activity from this marsh, nesting rails would not be disturbed. Although pile driving in Redwood Creek would occur over 1,200 feet from the nearest suitable habitat, the noise and vibration created by this activity could cause minor disturbance to breeding rails. Following construction, ferry operations would also contribute to increased noise in the area that could impact breeding rails. However, rails in marshes along Redwood Creek are likely already habituated to boat traffic and industrial activities occurring at the Port that may generate elevated noise and vibration. As a result of this habituation, considered in light of the long distance between vibration and noise sources and marshes with suitable habitat, project construction would have very little impact on these species' regionally available foraging habitat and no substantial adverse impact on regional populations of these species, and these impacts would be less than significant.

Ferry operation adjacent to Bair Island and Greco Island would impact these species if wave runup from the ferry caused scouring to the marsh plain, erosion of mudflat, or over washing of nests on oyster shell beaches. The results of the Ship Wake and Morphology Assessment Report (COWI 2025) indicate that ferries traveling at a speed of 35 knots in the Redwood Creek navigation channel between the ferry dock and power transmission towers between Bair Island and Greco Island would cause changes to the shoreline profile, resulting in significant impacts to tidal salt marsh, intertidal mudflat, and oyster shell beach habitat. Conversely, the report found that ferries traveling at a speed of 7 knots within the Redwood Creek navigation channel between the ferry dock and the northeast corner of Outer Bair Island (where Redwood Creek completely opens up to the Bay) had a negligible impact on tidal salt marsh, intertidal mudflat, and oyster shell beach habitat adjacent to the Redwood Creek navigation channel. As specified in Section 1.2.3 (Project Description), ferry vessels would slow to 7 knots within Redwood Creek. The transition would occur when the vessels are offshore of Bair Island's northeastern point to minimize wake effects on the marsh islands at Lights 5 and 6 (approximately 1.4 mile from the proposed ferry terminal). The change of speed would occur approximately 1 mile from land where wake impacts would have minimal effects on erosion.

Nonetheless, impacts on these marsh-breeding species would be significant because of the relatively low regional populations of these species and the potential for injury or mortality, or nest/habitat abandonment, as a result of use of heavy equipment and increased human disturbance during project construction and operation. Implementation of Mitigation Measure BIO-1, would minimize any adverse effects on these special-status species and their habitats. Mitigation Measure BIO-1 would train personnel involved in construction activities by a qualified biologist in the importance of tidal salt marsh and intertidal mudflats to these species, and the environmental protection measures put in place to prevent impacts to these species and their habitats. With implementation of Mitigation Measure BIO-1, impacts of the proposed project on the California Ridgway's

rail, California black rail, western snowy plover, salt marsh harvest mouse, salt marsh wandering shrew, Alameda song sparrow, and San Francisco common yellowthroat would be less than significant.

#### **6.1.4 Impacts on Nonbreeding Special-Status Birds (Less than Significant)**

Several special-status bird species may occur within the project footprint as nonbreeding migrants, transients, or foragers, but they are not known or expected to breed or occur in large numbers within or near the project impact area. These are the California least tern, short-eared owl, burrowing owl, olive-sided flycatcher, tricolored blackbird, Vaux's swift, and yellow warbler.

The California least tern (a federal and state endangered, and fully protected species) primarily nests in Alameda County, and although marginally suitable nesting habitat is present in remnant salt panne and oyster shell beach habitat on Bair Island, this species is not known to nest in these areas. California least terns may forage over the open waters in the ferry routes and adjacent to the terminal project area.

The burrowing owl (a state candidate species) no longer regularly nests on Outer Bair Island due to loss of suitable habitat related to tidal marsh restoration, but it may still nest there on occasion where uplands remain. This species would not nest in the terminal project area due to lack of suitable habitat, but it could roost in the terminal project area where riprap provides suitable cavities, and could also forage along the edge of the terminal project area where ruderal vegetation, tidal marsh, and mudflat support prey.

The tricolored blackbird (a state threatened species) is not expected to occur in the terminal project area as a breeder due to the absence of suitable breeding habitat, but individuals may occur occasionally as foragers during the non-breeding season. The Vaux's swift and olive-sided flycatcher (both California species of special concern), breed in forested habitats, which are not present in the terminal project area. However, they may occur as migrants. The yellow warbler, also a California species of special concern, breeds in riparian habitats where dense shrubs and young trees are present; no suitable breeding habitat for this species is present in the project area, but it may occur in the terminal project area as a nonbreeding visitor. The short-eared owl (a California species of special concern) was formerly known to nest in Bair Island, but was extirpated as a local breeder due to red fox (*Vulpes vulpes*) predation and is now only occasionally observed in the area as a winter migrant. This species would be unlikely to forage on or near the terminal project area due to the lack of abundant suitable habitat present to support California vole (*Microtus californicus*) populations that this species relies upon for prey.

Project activities would result in some loss or disturbance of open water/tidal aquatic, tidal salt marsh, ruderal, and developed habitats and could disturb foraging or roosting individuals of these species. Construction activities could result in a temporary direct impact through the alteration of foraging patterns (e.g., avoidance of work sites because of increased noise and activity levels during project construction) but would not result in the loss of individuals, as individuals of these species would be able to move away from any construction areas or equipment before they could be injured or killed. The terminal project area provides a small amount of foraging habitat for all of these species aside from the short-eared owl, however these areas do not provide

high-quality foraging habitat used regularly or by large numbers of individuals of any of these species. California least terns regularly forage in the open bay between Alameda Point and San Francisco and in the Oakland Estuary along the ferry routes. This area has existing navigation channels that are well used by watercraft transiting the Bay, including ferries, other large commercial vessels, and recreational boaters. The additional ferry trips that would occur under the proposed project represent a very small increase in the overall number of vessels transiting this area and they would not impact foraging least terns, which are habituated to the presence of vessels within the foraging areas. As a result, the proposed project would have very little impact on these species' regionally available foraging habitat and no substantial adverse impact on regional populations of these species. For all these reasons, impacts of the proposed project on nonbreeding special-status birds would be less than significant.

#### **6.1.5 Impacts on the Monarch Butterfly (Less than Significant)**

Monarch butterflies are not known to form roost aggregations along the San Francisco Bay shoreline in San Mateo County, and there is no expectation that such roosts will form in the future on or near the terminal project area. Further, this species is not expected to breed in the terminal project area due to the absence of milkweed, its larval host plant. Rather, monarch butterflies are expected to occur in the terminal project area only as occasional visitors during migration. Project construction and operation would not result in injury or mortality of monarchs, as they would fly away as personnel or equipment approaches. Because the terminal project area supports only low-quality and limited floral resources, the project would not result in the loss of any high-quality foraging habitat for migrant individuals. As a result, the proposed project would have a less than significant impact on this species' regionally available foraging habitat and a less than significant impact on regional populations of this species. Therefore, impacts on this species would be less than significant.

#### **6.1.6 Impacts on Western Red Bats and Pallid Bats (Less than Significant)**

The western red bat (a California species of special concern) usually roosts in the foliage of trees (Pierson et al. 2006). Day and night roosts are often located along the edges of riparian areas, near streams, grasslands, and even urban areas. During the breeding season, western red bats establish individual tree roosts and occasionally small maternity colonies in riparian habitats (Zeiner et al. 1990). Western red bats do not breed in San Mateo County. Although little is known about the habitat use of western red bats during the nonbreeding season (Pierson et al. 2006), western red bats are uncommon, and although there is suitable roosting and foraging habitat for this species in the terminal project area, this species has not been documented to occur in the project vicinity (CNDDB 2025, iNaturalist 2025). Further, because this species occurs primarily in riparian habitats, the western red bat is unlikely to occur in the few trees present in the project area. As a result, the western red bat would be highly unlikely to be impacted by the proposed project.

The pallid bat is a crevice-roosting bat. Due to this species' large body size, trees in the terminal project area do not provide crevices large enough to support even individual roosting pallid bats. Therefore, removal of trees is not expected to disturb this species. At most, occasional dispersants from other areas could forage on the site nocturnally. Due to the intensity of urban development in the terminal project area, there is no expectation

that a maternity colony or large roost of pallid bats would occur in or near the terminal project area, or that the species would forage regularly in the terminal project area. Due to the absence of suitable roosting habitat on the project site, this species is highly unlikely to occur on the project site.

In conclusion, the project is unlikely to impact any western red bats or pallid bats due to lack of observations of these species on the project site or vicinity and the absence of high-quality habitat. Thus, the project would not have a substantial adverse effect on these species, and impacts would therefore be less than significant.

#### **6.1.7 Impacts on California Sea Lions and Harbor Seals (Less than Significant with Mitigation)**

Harbor seals do not occur in the landside components of the terminal project area, but nearby Bair Island supports two haul out and pupping sites located on Corkscrew Slough and the bayward edge of Outer Bair Island. They occur frequently in Redwood Creek and Westpoint Slough immediately adjacent to (and possibly within) the terminal project area as foragers and in the open Bay along the ferry routes. California sea lions also would not occur on the landside components of the terminal project area itself, and would only very occasionally occur in Redwood Creek and Westpoint Slough. California sea lions regularly occur in the open Bay and Oakland Estuary along the ferry routes. Individuals of either species could be disturbed by construction activity in the terminal project area, potentially disturbing foraging activity in Redwood Creek and Westpoint Slough and causing them to move farther from the terminal project area. Increased disturbance in the form of elevated noise and vibration during construction could cause harbor seals to abandon pupping and haul out sites on Corkscrew Slough and Outer Bair Island. However, as these are located over 1 mile from the terminal project area, the intervening distance would attenuate project noise and vibration to a negligible level, and impacts on pupping and haul out sites would be less than significant. Due to the shipping activity at the Port of Redwood City and personal watercraft from nearby marinas, heavy industry along the shoreline, and other human activity in the terminal project area and ferry routes, any seals or sea lions occurring in the Bay near the terminal project area or ferry routes are sufficiently habituated to noise and human activity that occur out of water that there is a low probability of any adverse effect due to land-based construction activities or ferry operations.

However, underwater sound waves produced by in-water construction activities, such as pile driving, have the potential to cause injury of seals or sea lions such as temporary or permanent hearing impairment, physical damage to tissues and organs, cavitation (formation and collapse of water bubbles) related injuries, and in some cases, may induce a fight-or-flight response of rapid resurfacing that may lead to decompression sickness and possibly mortality (Erbe 2012). Dredging may increase water turbidity that could alter foraging patterns or reduce foraging success. Implementation of Mitigation Measure BIO-1, BIO-3 and BIO-4 would reduce the magnitude of underwater noise produced and increase in water turbidity, and as a result impacts on seals and sea lions would be less than significant.

#### **6.1.8 Impacts on Animals due to Increased Lighting (Less than Significant with Mitigation)**

The use of lighting at night during the construction phase or installation of lighting on buildings and around roads, paths, and parking lots may result in potential impacts on animal species. Many animals, both special-status and common species are sensitive to light cues, which influence their physiology and shape their behaviors, particularly during the breeding season (Ringer 1972, de Molenaar et al. 2006). Artificial light has been used as a means of manipulating breeding behavior and productivity in captive birds for decades (de Molenaar et al. 2006) and has been shown to influence the territorial singing behavior of wild birds (Longcore and Rich 2004, Miller 2006, de Molenaar et al. 2006). While it is difficult to extrapolate results of experiments on captive birds to wild populations, it is known that photoperiod (the relative amount of light and dark in a 24-hour period) is an essential cue triggering physiological processes as diverse as growth, metabolism, development, breeding behavior, and molting (de Molenaar et al. 2006). This holds true for mammals and other taxa as well (Beier 2006), suggesting that increases in ambient light may interfere with these processes across a wide range of species, resulting in impacts on wildlife populations. Artificial lighting may also indirectly affect animals by increasing the nocturnal activity of predators such as owls, hawks, and mammalian predators (Negro et al. 2000, Longcore and Rich 2004, DeCandido and Allen 2006, Beier 2006). The presence of artificial light may influence habitat use by rodents (Beier 2006) and breeding birds (Rogers et al. 2006, de Molenaar et al. 2006) by causing avoidance of well-lit areas, resulting in a net loss of habitat availability and quality.

Evidence that migrating birds are attracted to artificial light sources is abundant in the literature as early as the late 1800s (Gauthreaux and Belser 2006). Although the mechanism causing migrating birds to be attracted to bright lights is unknown, the attraction is well documented (Longcore and Rich 2004, Gauthreaux and Belser 2006). Migrating birds are frequently drawn from their migratory flight paths into the vicinity of an artificial light source, where they will reduce their flight speeds, increase vocalizations, and/or end up circling the lit area, effectively “captured” by the light (Herbert 1970, Gauthreaux and Belser 2006, Sheppard and Phillips 2015, Van Doren et al. 2017). When birds are drawn to artificial lights during their migration, they may become disoriented and possibly blinded by the intensity of the light (Gauthreaux and Belser 2006). The disorienting and blinding effects of artificial lights directly impact migratory birds by causing collisions with light structures, buildings, communication and power structures, or even the ground (Gauthreaux and Belser 2006). Indirect impacts on migrating birds include orientation mistakes and increased length of migration due to light-driven detours.

Up-lighting refers to light that projects upwards above the fixture. There are two primary ways in which the luminance of up-lights impact the movements of birds. First, local birds using habitats on a site may become disoriented during flights among foraging areas and fly toward the lights, colliding with the lights or with nearby structures. Second, nocturnally migrating birds may alter their flight direction or behavior upon seeing lights; the birds may be drawn toward the lights or may become disoriented, potentially striking objects such as buildings, adjacent power lines, or even the lights themselves.

Lighting associated with the construction of the proposed project would not be substantial and would be similar to or less than the adjacent uses (e.g., the Pacific Shores Center to the southeast and CEMEX marine terminal to the south), which contribute to the moderately high levels of ambient night lighting in the surrounding area (Lighting Zone LZ3; International Dark-Sky Association 2011). Light sources during construction would primarily include security lighting, which would be directed inward towards the terminal project area. Construction activities associated with the ferry terminal and related facilities would typically be limited to daytime hours, between 7 am and 7 pm, Monday through Friday. Nighttime construction activities, should they occur (e.g., to perform utility connections), would involve the use of on-site lighting. The lighting would include floodlights focused on the work area and not onto adjoining properties and would be limited in duration (short-term),<sup>4</sup> and thus would not create a new source of substantial light. Wildlife in adjacent aquatic and tidal marsh habitat are already conditioned to moderate levels of light at night due to existing lights present in the terminal project area and adjacent areas. During construction, a similar amount of light spillover may occur, therefore impacts on wildlife due to the use of security lighting during construction would be less than significant.

No detailed information regarding the project's proposed lighting design was available for review as part of this assessment. However, the proposed project would result in the construction of buildings and other features (e.g., for the ferry terminal project: access pier, gangway and float, walkways, entrance and passenger waiting area, as well as lighting for the surface parking lot, access road, along the Seaport Boulevard corridor improvements, and the Bay Trail; and for the visitor-serving uses: hotel, restaurant, and office building) that would necessitate lighting within the project footprint. Lighting from the proposed project would be the result of light fixtures illuminating buildings, building architectural lighting, and parking lot and pedestrian lighting. The new lighting would comply with Redwood City's Program BE-15 (Title 24 Lighting Zone), which requires that all new development and redevelopment use low mounted, downward casting exterior lighting to reduce light trespass onto adjacent properties. However, depending on the location, direction, and intensity of exterior lighting, this lighting could potentially spill into adjacent natural areas such as Redwood Creek, Westpoint Slough, Bair Island, Greco Island, or San Francisco Bay. Increased light at night can impact all marine life by shifting or otherwise disrupting circadian rhythm, resulting in changes in the timing of behavioral and physiological processes that impact foraging, reproduction, and survival. Such impacts have been observed in isopods (Duarte et al. 2019), bivalve mollusks (Botté et al. 2023), and fish (Brüning et al. 2015, Pulgar et al. 2019). Although the impacts of increased light at night on harbor seals (and most marine mammals) have not been well studied, they do have a circadian rhythm that is influenced by the amount of daylight (Oki and Atkinson 2004). Therefore, increased light at night may also negatively impact the harbor seal populations in the area by shifting or disrupting their circadian rhythm.

Lighting within the adjacent natural areas would increase, and animals using these areas may be subject to increased predation due to attraction, such as has been observed in Atlantic salmon (*Salmo salar*) and smelt (Tétard et al. 2019); increased hunting efficiency, as has been observed with harbors seals and several Pacific

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<sup>4</sup> Nighttime construction activities would occur only when needed throughout the construction period, such as to minimize traffic disruptions and disruptions in utility services. Such occurrences would not be typical and would not occur more than several nights in row.

*Oncorhynchus* spp. (Yurk and Trites 2000) and suspected at Arrowhead Marsh on Ridgway's rails (Casazza et al. 2016); decreased habitat availability for species that show aversions to increased lighting, as has been observed in the European eel (*Anguilla anguilla*), and alterations of physiological processes if development under the proposed project produces appreciably greater illuminance than the existing conditions. This impact on local wildlife populations would be significant due to the high ecological value of the adjacent portion of San Francisco Bay. In addition, lighting from the proposed project also has some potential to attract and/or disorient birds, especially during inclement weather when nocturnally migrating birds descend to lower altitudes. As a result of the increase in lighting in the terminal project area relative to baseline conditions, which currently consist of several low lumen and low temperature security lights, some birds moving along the San Francisco Bay at night may be (1) attracted to the terminal project area, where they are more likely to collide with buildings; and/or (2) disoriented by night lighting, potentially causing them to collide with the buildings. Such an impact would be significant due to the high number of birds that could be affected. Mitigation Measure BIO-5 is proposed to reduce impacts of operational lighting on animals.

**Mitigation Measure BIO-5. Lighting Impact Reduction Measures.** The following measures shall be implemented to reduce spillover of lighting into, or glare/increased luminance perceived by special-status animals using, aquatic and marsh habitats, as well as adverse effects of lighting on migratory birds.

- Through a combination of appropriate fixture selection that suits its purpose, low mounting height, glare shielding, and orientation/aiming of light fixtures, the design team shall actively control light spill towards sensitive habitat areas and towards the sky. All exterior landside lighting shall be fully shielded to block illumination from shining outward towards Redwood Creek and Westpoint Slough, and to prevent the lit portions of these fixtures (i.e., the lamps) from being visible to fish, birds, or mammals in the water. Limited uplighting may apply to select building façade areas and landscape features that are at least 50 feet from the high tide line along the Bay. These uplight fixtures shall incorporate glare shields and strategic aiming to prevent light from being visible beyond the feature being lit (i.e., the feature being lit shall block luminance from view of birds flying overhead); shall incorporate timeclock control to turn off uplighting from 10 pm until the next evening; and shall use 40-Watt maximum lamps to minimize light output.
- Along the gangway and loading area of the steel float, where night lighting is necessary for passenger safety, motion sensors will be used to limit when lights are on to only when necessary. Navigation lights at the corner of the steel float facing towards Redwood Creek will need to remain on at all times at night for ferry safety. All lights will be pointed downwards and will incorporate shields to focus the illumination towards the middle of the gangway and steel float. Low-intensity (100-200 lumens) and warm-colored (2700K-3000K) lighting will be used in these areas to minimize brightness and emission of blue lights that can disrupt wildlife circadian rhythms.
- Except as indicated in the previous bullet and lighting for public roadways and traffic signage lighting (including lighting for driveway entrances occurring in the public right-of-way), fixtures

shall comply with lighting zone LZ-2, Moderate Ambient, as recommended by the International Dark-Sky Association (2011) for light commercial business districts and high-density or mixed-use residential districts. The allowed total initial luminaire lumens for the terminal project area is 2.5 lumens per square foot of hardscape, and the Backlight/Uplight/Glare (BUG) rating for individual fixtures shall not exceed B3 or G2, as follows:

- B3: 2,500 lumens high (60–80 degrees), 5,000 lumens mid (30–60 degrees), 2,500 lumens low (0–30 degrees)
- G2: 225 lumens (forward/back light 80–90 degrees), 5,000 lumens (forward 60–80 degrees), 1,000 lumens (back light 60–80 degrees asymmetrical fixtures), 5,000 lumens (back light 60–80 degrees quadrilateral symmetrical fixtures)
- Exterior lighting shall be minimized in accordance with recommendations from the International Dark-Sky Association (2011) from midnight until dawn, at a minimum, except as needed for safety and City code compliance.
- Occupancy sensors, dimmers, or other mechanisms from 10 pm until dawn, at a minimum, shall be used during bird migration seasons (February–May and August–November) to reduce spillage of lighting from building interiors.

With implementation Mitigation Measure BIO-5, lighting impacts on animals, including special-status species, would be less than significant.

#### **6.1.9 Impacts on Migratory Waterbirds due to Ferry Operations (Less than Significant with Mitigation)**

The open bay along the ferry routes is heavily used by a wide range of migratory waterbirds, especially during the winter months when wintering migratory waterfowl are present. The open Central and South Bay collectively support roosting and foraging rafts of tens of thousands of diving ducks such as bufflehead, ruddy duck (*Oxyura jamaicensis*), scaup spp., and scoter spp.; thousands of dabbling ducks such as northern shoveler (*Spatula chrypeata*), American wigeon (*Mareca americana*), northern pintail (*Anas acuta*), and gadwall (*Mareca strepera*); and hundreds to thousands of western grebe (*Aechmophorus occidentalis*) and Clark's grebe (*Aechmophorus clarkii*) (Richmond et al. 2014). On-board ferry surveys conducted within the San Francisco Bay to determine how waterbirds responded to disturbance from ferries found that diving ducks, western grebe, and Clark's grebe were the most numerous on the ferry routes they surveyed, and most of these waterbirds elicited a response within 984 feet (Takekawa et al. 2008). The responses included (in increasing amount of energy expenditure) alert posture, swim, dive, and fly, with stronger responses elicited at closer distances. Using GPS, the same study found that ferry routes deviated by approximately 656 feet. The deviation may have been due to marine traffic, weather conditions, tidal variations, or navigational hazards. Therefore, the area in which ferries along the ferry routes may elicit a response from diving ducks and grebes may be as large as 1640 feet. These waterbirds preferred foraging habitat was observed to be shoals <13 feet in depth, and therefore ferries passing within 1640 feet may have particularly strong impacts on these species foraging behavior. In addition to these species, hundreds to thousands of brown pelican and double-crested cormorant (*Nannopterum auritum*) hunt for

fish in these waters (Cornell Lab of Ornithology 2025). Although these species roost on secluded land, and thus roosting impacts would be reduced, nevertheless their foraging behavior and habitat selection would be impacted by the operating ferries, especially cormorants that hunt from the water rather than diving, as brown pelicans do.

Waterbirds along a portion of the ferry routes may already be habituated to disturbance from currently operating ferries. For instance, once ferries from Redwood City reach Alameda, they would follow a similar route that ferries from the South San Francisco Ferry Terminal take to reach the Main Street Alameda and Oakland Ferry Terminals (San Francisco Bay Ferry 2025). Similarly, once Redwood City ferries reach Alameda, they would follow a similar route to reach the Downtown San Francisco Ferry Terminal as ferries departing from the Harbor Bay and Alameda Seaplane Ferry Terminals. Waterbirds may also be somewhat habituated to disturbance from ships and barges entering and exiting the Port of Redwood City that may travel a similar route. Between 2018 and 2024, an annual average of  $101 \pm 21$  vessels called on the Port of Redwood City, ranging from 10 vessels per month to slightly less than 7 per month (Port of Redwood City 2025). In addition, personal vessels operating out of the Port of Redwood City Municipal Marina, Westpoint Harbor, Coyote Point Marina, and Oyster Point Marina, including both motorized boats and non-motorized boats and kayaks, may occur along the ferry routes, and thus waterbirds may also be somewhat habituated to this disturbance.

The operation of ferries would increase the vessel traffic by adding 3 to 4 vessel trips for each of the San Francisco and Oakland routes during peak hours (e.g., 6 to 8 new vessel trips both in the morning and in the evening). This would represent an increase of up to 480 vessels calling on the Port of Redwood City per month. As the ferry service matures, midday, evening, weekend, and up to 15 days of special event service may be added, which would further increase the number of vessels calling on the Port.

The frequent operation of ferries out of the proposed Redwood City Ferry Terminal would be likely to cause additional disturbance to waterbirds and avoidance of otherwise suitable foraging habitat, which would be a significant impact. A Redwood City – San Francisco route was identified in an Implementation and Operations Plan (IOP) (WETA 2002) prepared in 2002 for the expansion of ferry service in the San Francisco Bay Area and evaluated in a 2003 Program EIR (WETA 2003). The Port is carrying forward Program EIR Mitigation Measure B-11 (referred to herein as Mitigation Measure BIO-6) to reduce the impacts on waterbirds due to ferry operations.

**Mitigation Measure BIO-6. Ferry Routes Consolidation.** Ferry routes shall be consolidated within common corridors, travel down deeper channels as much as possible, and choose the shortest routes across shallow areas to leave as much undisturbed shallow open-water habitat as possible.

With implementation of Mitigation Measure BIO-6, impacts on waterbirds due to ferry operation would be less than significant.

## **6.2 Impacts on Sensitive Communities: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS (Less than Significant with Mitigation)**

### **Impacts on Wetlands: 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 (Less than Significant with Mitigation)**

The habitats that are considered sensitive natural communities are also regulated as state or federally protected wetlands and aquatic habitats. Therefore, both “Impacts on Sensitive Communities” and “Impacts on Wetlands” are addressed in this impact section.

#### **6.2.1 Impacts on Riparian Habitat or Other Sensitive Natural Communities, Including State and Federally Protected Wetland and Aquatic Habitats (Less than Significant with Mitigation)**

The CDFW defines sensitive natural communities and vegetation alliances using NatureServe’s standard heritage program methodology (CDFW 2025), as described above in Section 5.3. Aquatic, wetland, and riparian habitats are also protected under applicable federal, state, or local regulations, and are generally subject to regulation, protection, or consideration by the USACE, RWQCB, CDFW, and/or the USFWS. Project impacts on sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies, and regulations, were considered and evaluated. The proposed project would impact tidal salt marsh (considered a sensitive natural community as “northern coastal salt marsh” by CDFW) and open water/tidal aquatic habitat. The Redwood City General Plan (City of Redwood City 2010) and San Francisco Bay Plan (BCDC 2025) identify the presence of tidal salt marsh and open water/tidal aquatic habitats in the project area. The National Wetlands Inventory identifies the presence of open water/tidal aquatic habitat in the project area (NWI 2025). Non-tidal riparian habitat is not identified as occurring in the project area by these sources.

No riparian woodland or forest is present on the project site, and none would be impacted by the project. However, project construction and operation activities, including both waterside and landside facilities, would impact tidal salt marsh and open water/tidal aquatic habitat that are considered sensitive natural communities. Wetland and aquatic habitats, including tidal salt marsh and open water/tidal aquatic, are considered waters of the U.S. and State. These habitats are protected under applicable federal, state, or local regulations, and are generally subject to regulation, protection, or consideration by the USACE, RWQCB, CDFW, and/or the USFWS. These areas provide disproportionate ecosystem functions and values related to flood protection and conveyance, maintenance of water quality, and habitats for species that use wetlands and waters. Wetlands observed on-site have the potential to be impacted and shaded by project construction. Wetlands are also

considered other waters under the Clean Water Act because they are not navigable waters but have a significant nexus to them.

Construction of buildings and other development associated with the ferry terminal project would result in permanent fill/loss of 0.001 acre of the tidal salt marsh located within the northwest corner of the terminal project area and temporary impacts to up to 0.10 acre of that tidal salt marsh due to construction activity and access. This habitat is considered both waters of the U.S. and State. Impacts to that tidal salt marsh have already been compensated through the Pacific Shores EIR, which indicated that mitigation would be provided for future impacts to that wetland even though the wetland would not be impacted by the Pacific Shores project itself. That compensatory mitigation was provided at the Bair Island mitigation site surrounded by Deepwater Slough (City of Redwood City 1994b). The Mitigation and Monitoring Plan implemented by the Pacific Shores EIR required the creation of 20 acres of tidal salt marsh within the 140 acre site located across Redwood Creek from the project site. A review of aerial photos demonstrated that the tidal salt marsh created by that mitigation is still intact (Google LLC 2025). In summary, the permanent and temporary impacts of the proposed project on tidal salt marsh would constitute a substantial adverse effect, but these impacts would be less than significant because of prior mitigation from the Pacific Shores Center Project. Therefore, the project would not have a significant impact in terms of substantial adverse effect on tidal salt marsh. No additional compensatory mitigation is necessary for impacts from the ferry terminal project to be less than significant under CEQA.

The proposed project would have no impacts on the muted tidal marsh in the northeastern portion of the terminal project area as it would be filled prior to construction by CEMEX pursuant to lease terms and as analyzed in a prior CEQA evaluation (Port of Redwood City 2001). This would occur before the end of the existing lease, prior to commencement of the Ferry Terminal project, and therefore the area currently supporting muted tidal marsh would be considered a ruderal land cover type at the time of project construction.

Construction of the ferry terminal and associated facilities would result in 0.39 acre of temporary impacts to open water/tidal aquatic habitat below HTL for dredging and construction access. The in-water ferry terminal consists of a pile-supported access pier (for a shelter platform and gangway connection), a floating platform with two ferry berths, and gangway within Redwood Creek. The floating platform would result in approximately 6,000 square feet of shading impacts to Bay waters. Additionally, the pile supported pier and the ramps would result in 1,680 square feet of shading to Bay waters, for a total of approximately 7,680 square feet. Therefore, 0.18 acre of permanent shading impacts would occur to tidal aquatic habitat due to placement of the ferry terminal float in Redwood Creek on the western border of the terminal project area. Water beneath the float does not contain eelgrass beds or other sensitive or submerged vegetation, and the gangway would be constructed of an aluminum mesh that allows some light transmission. Nevertheless, shading of existing tidal waters would constitute a significant impact by degrading conditions in the waters below.

The float would be supported by six steel guide piles approximately 36 inches in diameter and 120 feet long that would be in the water; and the access pier would be supported by four to ten steel or precast concrete piles with cap beams that are approximately 24- to 36-inches in diameter. Two of those piles would be upland and

up to eight would be in the water or tidelands. This would cause the permanent loss of up to 99 square feet of open water/tidal aquatic habitat, all within the 0.18-acre permanent shading impact footprint and in some cases below the area of shading.

The existing abandoned cement Shell Unloading Wharf on the northern side of the terminal project area currently shades approximately 13,500 square feet of Bay waters within Westpoint Slough (Google LLC 2025). As a part of this project, the existing abandoned wharf would be removed, resulting in the net decrease of overwater shading by approximately 5,820 square feet. Removal of the existing abandoned wharf on the northeastern edge of the terminal project area would provide a benefit to wetlands near this area due to the elimination of shading of an area measuring approximately 0.31 acre, as well as returning that area to open water/tidal aquatic. Following removal, tidal salt marsh could reestablish in a portion of this acreage where elevation is suitable to support this community. If removal of the wharf occurs within one year of construction of the in-water ferry terminal infrastructure, the estimated temporal lag that would allow the wharf removal to acceptably mitigate the salt marsh impacts, that removal would compensate for shading by the ferry terminal infrastructure and 99 square feet of impacts from new piles. Salt marsh vegetation colonizes very quickly when light and hydrological conditions are appropriate, so salt marsh vegetation would begin to establish in suitable areas within a year of removing the wharf. If removal of the wharf does not occur within one year, Mitigation Measure BIO-7 would be implemented to reduce impacts of shading from this infrastructure.

Shading from buildings constructed south of the tidal salt marsh in the northern part of the terminal project area could also have adverse effects on vegetation in wetlands by affecting growth, altering species composition, and influencing water temperature. The buildings are proposed to be approximately no more than 45 feet in height above proposed grade. Because the buildings would be south of the wetlands, they may provide some shading during the summer when the sun is more southerly in the sky. However, the wetland would be open to the sky to the east, north, and west, and is expected to receive enough light that shading from the buildings would not result in substantial adverse effects on wetland vegetation. Additionally, the 100-foot setback between the buildings and the edge of the Bay is expected to minimize any adverse effects of shading from buildings on wetlands or other sensitive habitats. Therefore, shading would not reduce the quality of vegetated wetlands to the extent that this impact would be significant.

Construction of the ferry terminal and associated facilities would require work within 0.57 acre of open water/tidal aquatic at Redwood Creek on the western border of the terminal project area. Work within Redwood Creek would include the construction of the new ferry terminal and later maintenance dredging, which could result in temporary construction impacts to water quality. In addition to pile installation, dredging would be required to construct the ferry terminal and operate the ferry service. Currently, the USACE dredges the Redwood Creek channel to allow passage of cargo ships. The channel is authorized for maintenance dredging by the USACE on an annual cycle and has an authorized dredging depth of -30 feet MLLW. Dredging is anticipated to continue to take place within Redwood Creek to allow the Port of Redwood City to continue to accommodate large cargo ships. Additional dredging, represented by the 0.39 acre of temporary impacts to the aquatic site, would be required to construct the ferry terminal for the proposed project. Dredging has the

potential to cause disturbance to water quality. Conformance with the Statewide General Construction Permit, the Phase II Small MS4 permit requiring stormwater treatment for new or redeveloped areas, and DMMO requirements for the proposed project would reduce potential dredging-related water quality impacts to open water, however, the impact would remain significant. Implementation of Mitigation Measure BIO-4, discussed in Section 6.1 above, would reduce potential dredging-related water quality impacts to open water to a level that is less than significant.

The proposed project would result in impacts to jurisdictional wetlands and other waters, including dredging and filling of Waters of the U.S. and State from ferry terminal in-water work, and temporary impacts related to construction access. Direct and indirect impacts on open water/aquatic habitats would be significant due to the loss of such sensitive habitats that has occurred regionally and the proportionately high ecological value of aquatic habitats. As discussed in Section 6.1.2, standard BMPs would be implemented to control erosion, sedimentation, and runoff during construction activities. In addition, Mitigation Measures BIO-2 and BIO-7 are proposed to address impacts on riparian habitat and other sensitive natural communities, including state and federally protected jurisdictional wetlands and other waters, by requiring adherence to dredging protocols established by the LTMS and requiring compensatory mitigation for permanent impacts to waters.

**Mitigation Measure BIO-7. Compensatory Mitigation for Permanent Impacts to Waters.**

Should removal of the Shell Unloading Wharf not occur within one year following the completion of the in-water ferry terminal infrastructure, compensatory mitigation would be required for significant impacts to open water/tidal aquatic habitat due to shading from ferry terminal infrastructure and 99 square feet of impacts from new piles. If the abandoned wharf is removed within one year following the completion of the in-water ferry terminal infrastructure, that would provide the necessary compensatory mitigation. If the abandoned wharf is not removed within one year following the completion of the project, compensatory mitigation may be satisfied by (1) utilizing a portion of the fill credit issued to the Port of Redwood City by BCDC in 2013 for a reduction in Bay surface coverage of 29,725 feet (BCDC 2013), if approved by the BCDC, USACE, RWQCB, and CDFW (if a permit from CDFW is necessary); (2) purchasing mitigation credits through an appropriate bank such as the San Francisco Bay Bank; or (3) implementing project-specific mitigation via creation, restoration, or substantial enhancement of tidal aquatic or tidal wetland habitat. If option 3 is used to satisfy compensatory mitigation, it would be conducted in such a way as to achieve a 2:1 ratio on-site somewhere in San Mateo County, or as otherwise required by any state or federal permitting agencies. A qualified biologist shall develop a “Wetland Mitigation and Monitoring Plan” describing the mitigation, which shall contain the following components (or as otherwise modified by regulatory agency permitting conditions):

- Summary of habitat impacts and proposed mitigation ratios
- Goal of the restoration to achieve no net loss of habitat functions and values
- Location of mitigation site(s) and description of existing site conditions

- Mitigation design:
  - Existing and proposed site hydrology
  - Grading plan if appropriate, including bank stabilization or other site stabilization features
  - Soil amendments and other site preparation elements as appropriate
  - Planting plan
  - Irrigation and maintenance plan
  - Remedial measures and adaptive management
- Monitoring plan (including final and performance criteria, monitoring methods, data analysis, reporting requirements, and monitoring schedule). Success criteria will include quantifiable measurements of wetland vegetation type (e.g., dominance by natives) and quantity appropriate for the restoration location, and provision of ecological functions and values equal to or exceeding those in the wetland habitat affected. At a minimum, success criteria will include following:
  - At Year 5 post-mitigation, at least 75 percent of the mitigation site for tidal salt marsh will be dominated by native hydrophytic vegetation, which is an appropriate percentage for a relatively young tidal salt marsh that is on a trajectory toward providing high-quality tidal salt marsh when mature.

If providing compensatory mitigation for planned permanent impacts to open water/tidal aquatic habitat, the Wetland Mitigation and Monitoring Plan must be approved by any regulatory agencies requiring compensatory mitigation prior to the impacts, and implementation of the Plan must begin within one year after the initiation of permanent impacts to open water/tidal aquatic habitat.

With compliance with the SWPPP that would include implementation of standard construction BMPs to control erosion, sedimentation, and runoff and Mitigation Measures BIO-2 and BIO-7, impacts on riparian and other natural communities, including state and federally protected jurisdictional wetlands and other waters, would be reduced to a level that is less than significant.

### Project Operation

Operation of the new ferry terminal would result in increased boat traffic along the ferry routes, which contains extensive tidal salt marsh habitat along Redwood Creek and small patches of eelgrass along San Francisco Bay and the Oakland Estuary. Impacts of maintenance dredging are analyzed as part of the discussion of project construction, above. Operation of the ferry at the speeds proposed by the proposed project would not have a substantial adverse effect on either of these sensitive natural communities identified in local or regional plans, policies, or regulations, or by CDFW or USFWS. According to wind and wake analysis, Ship Wake and Morphology Assessment Report for the Port of Redwood City Ferry Terminal Environmental Review (COWI 2025), at vessel speeds of 7 knots or less, impacts to shoreline erosion and profile changes would be less than significant. Therefore, no mitigation for impacts to state or federally protected wetlands, riparian habitat, or

other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS is required for the operation of the ferry.

### **6.3 Impacts on Wildlife Movement: 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 (Less than Significant with Mitigation)**

#### **6.3.1 Impacts on Wildlife Movement (Less than Significant)**

As discussed in Section 4.3, the terminal project area does not provide well-defined movement pathways for animals within or through the terminal project area due to the density of development in the project region and the lack of continuous, well-vegetated pathways through the nearby urban areas. Wildlife species may move through the area using cover and refugia as they find them available, and mammals and reptiles may move along the bayshore. However, connectivity along Redwood Creek and Westpoint Slough is interrupted by U.S. 101 and other roads and culverted areas. In addition, the project footprint is not a heavily-used area for movement by non-flying wildlife due to the lack of food and resting sites, and it does not contain any high-quality corridors allowing dispersal of such animals. Redwood Creek and Westpoint Slough provide movement corridors for common fish species and marine mammals to transit between the waters in and around tidal marshes and the open waters of the San Francisco Bay, but do not support any breeding special-status species. Open water along the ferry route in the San Francisco Bay supports fish and harbor seals. Due to the pre-existing frequency of vessels in these areas, aquatic wildlife in these areas are habituated to vessel disturbance. In addition, Steinberger Slough, located 4 miles to the west of Redwood Creek, provides an alternative path for wildlife to transit to the San Francisco Bay. For all these reasons, the proposed project would not interfere substantially with the movement of any native resident or migratory aquatic or terrestrial wildlife species or with established native resident or migratory terrestrial wildlife corridors, or impede the use of native terrestrial wildlife nursery sites; the impact would be less than significant.

#### **6.3.2 Impacts due to Bird Collisions with Buildings (Less than Significant with Mitigation)**

Development of the proposed project would result in the construction of new buildings that are taller, and occupy more of the terminal project area, than existing buildings. Construction of the new buildings may increase the risk of avian mortality due to collisions. Glass windows and building façades can result in injury or mortality of birds due to collisions with these surfaces. Because birds do not perceive glass as an obstruction the way humans do, they may collide with glass when the sky or vegetation is reflected in glass (e.g., they see the glass as sky or vegetated areas); when transparent windows allow birds to perceive an unobstructed flight route through the glass (such as at corners); and when the combination of transparent glass and interior vegetation (such as in planted atria) results in attempts by birds to fly through glass to reach that vegetation. These risks are highest for buildings in or near areas of high avian activity or movement, such as migratory

corridors, large open spaces, large water bodies, and riparian habitats. Bird collision risk can be exacerbated by artificial lighting, as described in Section 6.1.9 above.

The terminal project area is located along the Pacific Flyway and is within 2 miles of Bedwell Bayfront Park, which supports large numbers of resident and migratory bird species (Cornell Lab of Ornithology 2025). Currently, avian abundance and diversity is relatively low in the terminal project area, despite the terminal project area's proximity to Bedwell Bayfront Park, due to the low-quality habitat that currently exists in the terminal project area and the surrounding development. However, due to the terminal project area's position along the edge of San Francisco Bay, moderate numbers of birds move through or past the terminal project area, and once the project is completed, it is anticipated that avian abundance in the terminal project area would increase as a result of landscaping specifically intended to improve habitat for native birds. Though many of the species associated with the Bay's aquatic and shoreline habitats are not expected to use the upland habitats in the terminal project area, many resident and migratory species would move between the terminal project area and nearby habitats or would fly through the terminal project area. Thus, following construction of the proposed project, birds using on-site habitats or flying through the area (from any direction) would have the potential to collide with the new buildings.

Because the details of the façades (e.g., with respect to locations of glass and bird-safe glazing features) and lighting are still being determined, there is the potential for avian collisions to occur frequently enough to interfere substantially with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, which would be a significant impact. Mitigation Measure BIO-5 for lighting impacts (refer to Section 6.1.8) and Mitigation Measure BIO-8 for bird-safe design are proposed to address avian collision impacts.

**Mitigation Measure BIO-8. Implement Bird-Safe Building Design.** Due to the potential for glazed façades on new buildings constructed by the project, prior to issuance of building permits from Redwood City, the building plans shall demonstrate the inclusion of the following bird-safe building design measures.

- Minimize continuously glazed zones on façades. Break up areas of glazing on façades by non-glazed, articulated features such as louvers, mullions, muntins, fins, solar shades, opaque panels, or other patterning so that the façades of buildings do not overall appear like smooth glazed surfaces. Break up glass surfaces into panels less than 24 square feet in extent.
- Avoid the use of highly reflective glass that will reflect the sky, water, or vegetation. Reflectance between 10 and 20 percent is preferable (San Francisco Planning Department 2011). Glass that is treated to be "bird-friendly", as described below, shall have a reflectance value no more than 15 percent so that frit or other glazing treatment is readily visible to birds, unless the glazing treatment is on the outside surface and a qualified biologist examines a sample of the glass and confirms that the bird-safe treatment is sufficiently visible.

- Bird-friendly glazing includes, but is not limited to, opaque glass, fritting, netting, permanent stencils, frosted glass, exterior screens, physical grids placed on the exterior of glazing, or ultraviolet patterns visible to birds. Elements of the bird-safe glazing patterns should be at least 0.25 inch wide at a maximum spacing of 2 inches horizontally and 2 inches vertically, or should be certified by the American Bird Conservancy to have a “threat factor” of no more than 20 for the measure below addressing the primary bird collision zone and no more than 15 for the measure below addressing feature-related hazards.
- Within the primary bird collision zone (0-60 feet above the ground), no more than 10% of façade surface area shall have non-bird-friendly glazing.
- Avoid or minimize areas where birds will perceive a clear flight path through a solid surface, such as transparent free-standing glass walls, skyways, railings, or building corners. Any such “feature-related hazards” will be 100% treated with bird-friendly glazing.
- Avoid having vegetation inside buildings near glass (e.g., in areas where birds will try to access the vegetation).
- Proposed landscaping should be designed so that birds using such landscaping are not funneled into areas where they are surrounded by glazing. Minimizing vegetation near extensively glazed façades (e.g., having less extensive vegetation, and restricting vegetation to low-growing grasses, forbs, or scattered shrubs as opposed to more extensive shrubs and trees) would be ideal. Vegetation near heavily glazed façades should not include plant species that provide high-quality foraging habitat, such as plants that provide fruits that are frequently eaten by birds.

With implementation of Mitigation Measures BIO-5 and BIO-8, avian collision impacts would be reduced to a level that is less than significant.

### **6.3.3 Impacts on Nesting Birds (Less than Significant with Mitigation)**

Construction disturbance during the avian breeding season (February 1 through August 31, for most species; (CDFW 2022) could result in the incidental loss of eggs or nestlings, either directly through the destruction or disturbance of active nests or indirectly by causing the abandonment of nests. Due to the paucity of sensitive habitats in the terminal project area, the habitats in the terminal project area support only regionally common, urban-adapted breeding birds and support only a very small proportion of these species’ regional populations. In addition, birds are expected to nest and forage in the terminal project area in greater abundance after project construction is completed due to increased landscaping. Therefore, project impacts on nesting birds that use the site, due to habitat impacts or disturbance of nesting birds, would not be significant.

However, an abandoned cement Shell Unloading Wharf along the northeastern edge of the terminal project area supports approximately 150 pairs of cliff swallows. Removal of this wharf would result in the loss of this nest substrate. Due to the abundance of suitable bridges, buildings, and docks/wharves used by nesting cliff swallows in the region, the loss of nest substrate resulting from removal of the abandoned wharf would not

result in a decline in regional cliff swallow populations, as the displaced birds would be able to find alternative nest sites. Therefore, the loss of cliff swallow nest substrate would not impede the use of a native wildlife nursery site and the impact would be less than significant. However, if the abandoned wharf were removed during the breeding season, up to 150 nests' worth of cliff swallow eggs or young could be destroyed. Thus, removal of the abandoned wharf during the breeding season would impede the use of a native wildlife nursery site and the impact would be significant. In addition, all native bird species that may nest in the terminal project area are protected from direct take by federal and state statutes (see Sections 3.1.4 and 3.2.2). Mitigation Measures BIO-9 through BIO-11 are proposed to address impacts on nesting birds. These measures would ensure that project activities comply with the MBTA and California Fish and Game Code, and that no nests of migratory birds would be disturbed during project implementation.

**Mitigation Measure BIO-9. Seasonal Avoidance/Pre-disturbance Surveys.** Tree removal, demolition, and the start of construction activities shall be scheduled to avoid the nesting season. If such activities take place outside the nesting season, all impacts on nesting birds protected under the MBTA and California Fish and Game Code will be avoided. The nesting season for most birds in San Mateo County extends from February 1 through August 31.

If it is not possible to schedule construction activities between September 1 and January 31, then preconstruction surveys for nesting birds shall be conducted by a qualified ornithologist to ensure that no nests of migratory birds will be disturbed during project implementation. These surveys shall be conducted no more than 7 days prior to the initiation of tree removal, demolition, ground disturbance, or construction activities for each construction phase. During this survey, the biologist will inspect all trees and other potential nesting habitats (e.g., trees, shrubs, buildings, and the ground) in and immediately adjacent to the impact areas for migratory bird nests.

**Mitigation Measure BIO-10. Buffers.** If an active nest is found within areas that would be disturbed by project activities, the ornithologist shall determine the extent of a construction-free buffer zone to be established around the nest (typically 300 feet for raptors and 100 feet for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation.

**Mitigation Measure BIO-11. Inhibition of Nesting.** If construction activities will not be initiated until after the start of the nesting season, all potential nesting substrates (e.g., bushes, trees, grasses, and other vegetation) that are scheduled to be removed by the project may be removed prior to the start of the nesting season (e.g., prior to February 1). This will preclude the initiation of nests in this vegetation. With implementation of Mitigation Measures BIO-9 through BIO-11, impacts on nesting birds would be reduced to a level that is less than significant.

## **6.4 Impacts due to Conflicts with Local Policies: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (No Impact)**

### **6.4.1 Impacts Due to the Removal of Ordinance-Sized Trees (No Impact)**

A small number of ornamental trees would be removed in the terminal project area that may meet the definition of “heritage tree” as defined by Redwood City Municipal Code Section 35.2. Per the City of Redwood City, permits from the City’s parks and recreation are required for the removal of any trees which meet the definition of “heritage” tree, as defined in Section 3.3 above. All tree disturbance and removal for the proposed project would comply with Redwood City Municipal Code Section 35.2, as well as the Redwood City Street Tree Ordinance (Ordinance No. 1010, Section 1), and Redwood City Tree Preservation Ordinance (Ordinance No. 1536, Section 1, 6-26-72) which would avoid any potential impacts due to conflicts with the City’s tree preservation ordinance. There would be no impact.

## **6.5 Impact due to Conflicts with an Adopted Habitat Conservation Plan: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan (No Impact)**

The San Bruno Mountain Habitat Conservation Plan is the only Habitat Conservation Plan that has been approved in San Mateo County, but this plan does not cover the project area or the surrounding vicinity. No Natural Community Conservation Plans have been approved or are in preparation in San Mateo County. Therefore, the proposed project would not conflict with any adopted Habitat Conservation Plans or Natural Community Conservation Plans, or with any other approved local, regional, or state habitat conservation plans. There would be no impact.

## **6.6 Cumulative Impacts**

Cumulative impacts arise due to the linking of impacts from past, current, and reasonably foreseeable future projects in the region. The cumulative impact on biological resources resulting from the proposed project in combination with other projects in the project vicinity and larger region would be dependent on the relative magnitude of adverse effects of these projects on biological resources, as reduced by impact avoidance and minimization efforts prescribed by planning documents, CEQA mitigation measures, and permit requirements for each project; compensatory mitigation; and proactive conservation measures associated with each project. In the absence of such avoidance, minimization, compensatory mitigation, and conservation measures, cumulatively significant impacts on biological resources would occur.

Implementation of the proposed project, in combination with other projects in the area and other activities that impact the species that are affected by this project, would contribute to cumulative effects on special-status fish and EFH, federally or state protected wetlands and waters, habitat for nonbreeding special-status species, migratory birds, and roosting bats. Other projects within the vicinity that may affect similar habitats and species include the Mission Bay Ferry Landing Project, proposed Berkeley Pier/Ferry Project, and the Oakland Harbor Turning Basins Widening Navigation Study, which all would increase vessel activity and/or the size of vessels operating in the ferry routes; proposed residential development projects at 1548 Maple Street, 505 East Bayshore Road, and 557 East Bayshore Road; the proposed office/R&D project at 800-3400 Bridge Parkway in Redwood City; the flood protection and restoration project South San Francisco Bay Shoreline Project and proposed flood protection/restoration project Strategy to Advance Flood protection, Ecosystems and Recreation along San Francisco Bay (SAFER Bay) in East Palo Alto, Menlo Park, and Redwood City; the proposed restoration projects Beneficial Reuse of Excavated Material in Tidal Marsh Restoration Project (Beneficial Reuse Project) and Calabazas/San Tomas Aquino Creek-Marsh Connection Project. Future projects coupled with the proposed project would result in cumulative impacts on the same habitat types and species that would be affected by the proposed project. This would be a significant impact prior to the implementation of mitigation. However, these future projects will all be subject to conditions of their project approvals (e.g., CEQA mitigation measures) as well as the conditions of any applicable regulatory agency permits, to avoid, minimize, and mitigate impacts on these resources, thus reducing cumulative impacts. Furthermore, SAFER Bay,<sup>5</sup> South San Francisco Bay Shoreline Project,<sup>6</sup> Beneficial Reuse of Excavated Material in Tidal Marsh Restoration Project,<sup>7</sup> and Calabazas/San Tomas Aquino Creek-Marsh Connection Project<sup>8</sup> incorporate substantial restoration and enhancement components that would further reduce cumulative impacts. Therefore, cumulative impacts on biological resources due to the project would be less than significant.

The Redwood City Ferry Terminal Project would implement mitigation measures to reduce impacts on special-status species, sensitive habitats, migratory birds, and roosting bats, as described above. Thus, the proposed project's contribution to an individual effect on biological resources would not be cumulatively considerable.

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<sup>5</sup> San Francisco Bay Joint Powers Authority. The SAFER Bay Project: Strategy to Advance Flood Protection, Ecosystems and Recreation along San Francisco Bay webpage. Available: <https://www.sfcjpa.org/safer-bay-project>. Accessed September 5, 2025. Accessed September 5, 2025.

<sup>6</sup> U.S. Army Corps of Engineers, San Francisco District. South San Francisco Bay Shoreline Study webpage. Available: <https://www.spn.usace.army.mil/Missions/Projects-and-Programs/Current-Projects/South-San-Francisco-Bay-Shoreline-Study/>. Accessed September 5, 2025.

<sup>7</sup> Valley Transportation Authority. Beneficial Reuse of Excavated Material in Tidal Marsh Restoration Project webpage. Available: <https://www.vta.org/projects/vta-beneficial-reuse-project>. Accessed September 5, 2025.

<sup>8</sup> Valley Water. Calabazas/San Tomas Aquino Creek-Marsh Connection Project webpage. Available: <https://www.valleywater.org/project-updates/calabazas-san-tomas-aquino-creek-marsh-connection-project>. Accessed September 5, 2025.

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## Appendix A. Plant Species Observed in the Terminal Project Area

| Family          | Scientific Name                                   | Common Name               | WIC <sup>1</sup> |
|-----------------|---------------------------------------------------|---------------------------|------------------|
| Aizoaceae       | <i>Carpobrotus chilensis</i>                      | Sea fig                   | FACU             |
| Amaranthaceae   | <i>Salicornia pacifica</i>                        | Pickleweed                | OBL              |
| Amaranthaceae   | <i>Salsola soda</i>                               | Alkali Russian thistle    | FACW             |
| Apiaceae        | <i>Foeniculum vulgare</i>                         | Fennel                    | UPL              |
| Arecaceae       | <i>Washingtonia robusta</i>                       | Mexican fan palm          | UPL              |
| Asteraceae      | <i>Baccharis pilularis</i>                        | Coyote brush              | UPL              |
| Asteraceae      | <i>Carduus pycnocephalus</i>                      | Italian thistle           | UPL              |
| Asteraceae      | <i>Centaurea solstitialis</i>                     | yellow star-thistle       | UPL              |
| Asteraceae      | <i>Cynara cardunculus</i> ssp. <i>cardunculus</i> | Artichoke thistle         | UPL              |
| Asteraceae      | <i>Glebionis coronaria</i>                        | Crown daisy               |                  |
| Asteraceae      | <i>Grindelia stricta</i>                          | Gumplant                  | FACW             |
| Asteraceae      | <i>Helminthotheca echioides</i>                   | Bristly ox-tongue         | FAC              |
| Asteraceae      | <i>Jaumea carnosa</i>                             | Marsh jaumea              | OBL              |
| Asteraceae      | <i>Lactuca serriola</i>                           | Prickly lettuce           | FACU             |
| Asteraceae      | <i>Pseudognaphalium luteoalbum</i>                | Jersey cudweed            | UPL              |
| Brassicaceae    | <i>Brassica nigra</i>                             | Black mustard             | UPL              |
| Brassicaceae    | <i>Lepidium latifolium</i>                        | Broadleaved pepperweed    | FAC              |
| Caryophyllaceae | <i>Spergularia</i> sp.                            | Sandspurry                | FAC              |
| Chenopodiaceae  | <i>Atriplex prostrata</i>                         | Fat-hen                   | FACW             |
| Convolvulaceae  | <i>Cuscuta</i> sp.                                | Dotter                    | --               |
| Cyperaceae      | <i>Bolboschoenus</i> sp.                          | Bulrush                   | OBL              |
| Fabaceae        | <i>Medicago polymorpha</i>                        | California burclover      | FACU             |
| Fabaceae        | <i>Melilotus albus</i>                            | White sweetclover         | UPL              |
| Fabaceae        | <i>Melilotus indicus</i>                          | Annual yellow sweetclover | FACU             |
| Fabaceae        | <i>Vicia</i> sp.                                  | Vetch                     | FACU             |
| Frankeniaceae   | <i>Frankenia salina</i>                           | Alkali heath              | FACW             |
| Liliaceae       | <i>Agapanthus africanus</i>                       | Lily of the Nile          | UPL              |
| Malvaceae       | <i>Malva arborea</i>                              | Tree mallow               | UPL              |
| Myrsinaceae     | <i>Lysimachia arvensis</i>                        | Scarlet pimpernel         | FAC              |
| Onagraceae      | <i>Epilobium brachycarpum</i>                     | Tall annual willowherb    | FAC              |
| Pinaceae        | <i>Pinus</i> sp.                                  | Pine                      | UPL              |
| Plantaginaceae  | <i>Plantago coronopus</i>                         | Buck-horn plantain        | FAC              |
| Plumbaginaceae  | <i>Limonium ramosissimum</i>                      | Algerian sea lavender     | FACW             |

| <b>Family</b> | <b>Scientific Name</b>     | <b>Common Name</b> | <b>WIC<sup>1</sup></b> |
|---------------|----------------------------|--------------------|------------------------|
| Poaceae       | <i>Avena fatua</i>         | Wild oat           | UPL                    |
| Poaceae       | <i>Bromus diandrus</i>     | Ripgut brome       | UPL                    |
| Poaceae       | <i>Cortaderia selloana</i> | Pampas grass       | FACU                   |
| Poaceae       | <i>Cynodon dactylon</i>    | Bermuda grass      | FACU                   |
| Poaceae       | <i>Distichlis spicata</i>  | Salt grass         | FAC                    |
| Poaceae       | <i>Hordeum murinum</i>     | Foxtail barley     | FACU                   |
| Poaceae       | <i>Spartina sp.</i>        | cordgrass          | OBL                    |
| Salicaceae    | <i>Populus fremontii</i>   | Fremont cottonwood | UPL                    |
| Salicaceae    | <i>Salix sp.</i>           | Willow             | FACW                   |
| Solanaceae    | <i>Nicotiana glauca</i>    | Tree tobacco       | FAC                    |

<sup>1</sup>. WIC = Wetland Indicator Code - obtained from National Wetland Plant List (USACE 2020). When species was not listed, species was assigned UPL Wetland Indicator Code.

## Appendix B. Representative Photos of the Terminal Project Area

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**Photo 1. Tidal salt marsh in the northern portion of the terminal project area, bordering the San Francisco Bay; view is to the west at low tide.**



**Photo 2. Tidal salt marsh in the northern portion of the terminal project area, bordering Westpoint Slough and the abandoned wharf; view is to the east at low tide.**



**Photo 3. Representative photograph of the developed land cover type showing the existing CEMEX plant south of the terminal project area; view is to the south.**



**Photo 4. Representative view of the Bay Trail on the eastern side of the terminal project area; view is to the west.**



**Photo 5. Representative view of the ruderal band of vegetation bordering the developed portion of the terminal project area; view is to the west.**