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Ecological Consultants

Newark Area 4
2019 Biological Resources Technical Report

Project #2596-17

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July 25, 2019

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Section 1. Introduction

H. T. Harvey & Associates has prepared this report to describe and update the biological resources and potential biological impacts associated with The Sobrato Organization's proposed development project (Project) within Area 4 in Newark, California.

In March 2015, the City of Newark certified the Newark Areas 3 and 4 Specific Plan Recirculated Final Environmental Impact Report (RFEIR) (State Clearinghouse No. 2007052065) and adopted the Newark Areas 3 and 4 Specific Plan (Specific Plan). Area 4 encompasses 560 acres of land. (Figure 1). The Specific Plan approved the development of 316 acres within Area 4, including the construction of up to 675 single family homes, a golf course, other recreational uses, and associated infrastructure. The Specific Plan identified the general locations and configurations of approved Area 4 uses, but did not identify the exact location and configuration of Area 4 residential lots or other facilities, as that was to be determined later, at the time of subdivision map approval.

The Project implements the Specific Plan in Area 4 based on site-specific review of residential lots and other related improvements. The Project proposes to only develop approximately 96.5 acres of Sub-Area B and Sub-Area C's developable area of 180 acres, which itself is a portion of the 316 acres approved for development in the Specific Plan. The Project includes up to 469 single-family homes with associated parking areas, roadways, and multi-use trails, as reflected in a detailed site development plan, and does not include construction of a golf course (Figure 2).

Area 4 biological resources and potential impacts were previously analyzed in the *Newark Areas 3 and 4 Specific Plan Draft Environmental Impact Report Biological Resources Technical Report* (Biological Resources Report) (H. T. Harvey & Associates 2009), *Newark Areas 3 and 4 Specific Plan Project Draft Environmental Impact Report* (City of Newark 2009), *Newark Areas 3 and 4 Specific Plan Project Final Environmental Impact Report* (City of Newark 2010), *Newark Areas 3 and 4 Specific Plan Project Recirculated Draft Environmental Impact Report* (City of Newark 2014), and the certified RFEIR (City of Newark 2015).

The purpose of this report is to facilitate the City's CEQA review of the proposed Project by updating relevant biological resources information for Area 4, and updating the evaluation of impacts to biological resources in light of the specific characteristics (e.g., size, location within Area 4, types of development, etc.) of the Project.

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Figure 1. Vicinity Map
Newark Area 4 Biological Resources Technical Report (2596-17)
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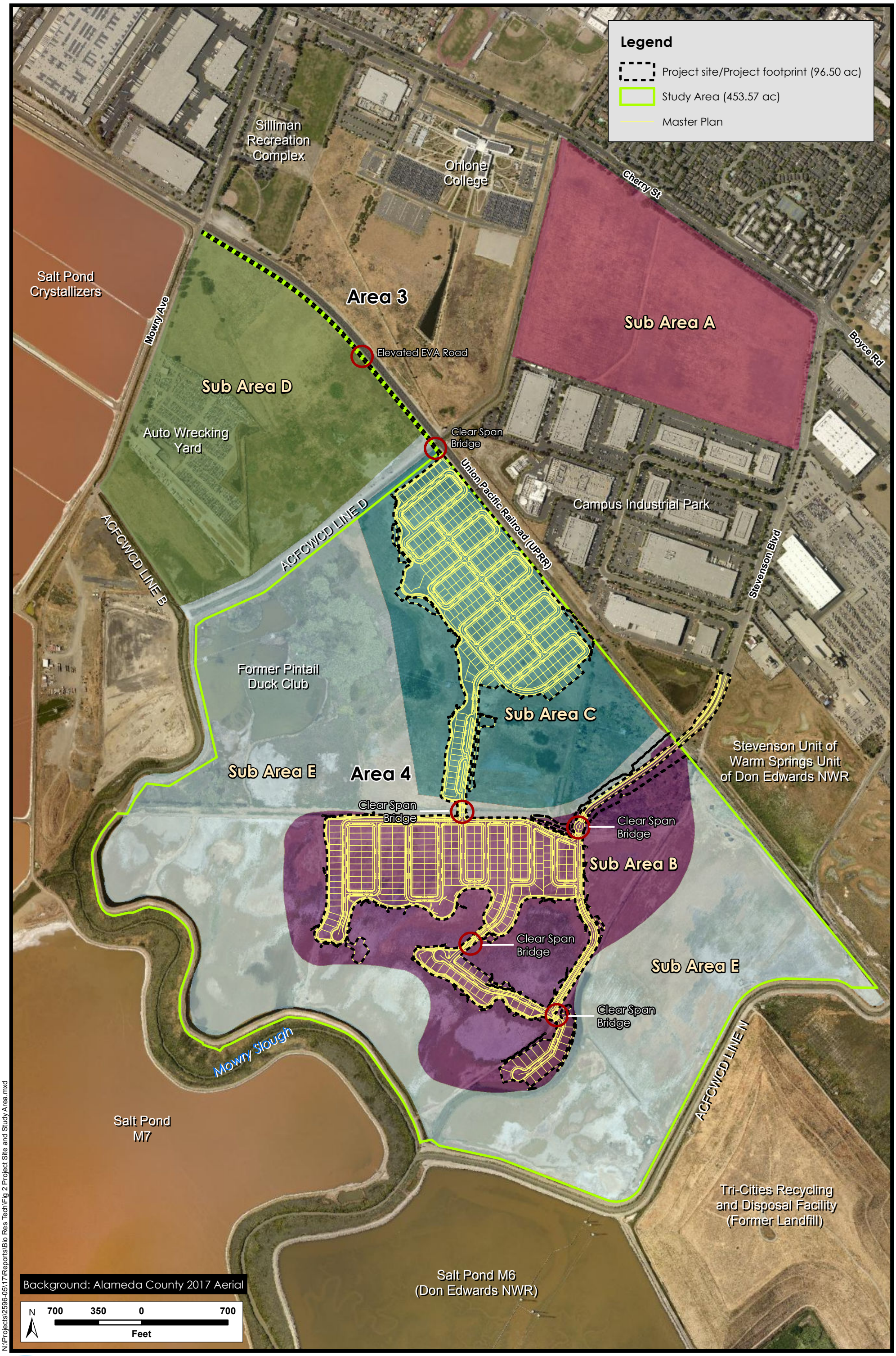

N:\Projects\2596-05\17\Reports\Bio Res Tech\Fig 2 Project Site and Study Area.mxd

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Figure 2. Project Site and Study Area
Newark Area 4 Biological Resources Technical Report (2596-15)
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1.1 Project and Study Area Description

The Project will develop up to 469 single-family residences, areas of open space, and associated infrastructure improvements on approximately 96.5 acres in only Sub-Areas B and C of the Area 4 planning area. (Figure 2). No golf course is proposed. With the exception of emergency vehicle access and pedestrian access across Sub-Area D of Area 4 to Mowry Avenue, no development is proposed outside of Sub-Areas B and C. For the purpose of this report, the study area consists of 453.37 acres and includes the Project footprint as well as all portions of Area 4 located south of the Alameda County Flood Control & Water Conservation District Drainage Canal Line D (i.e., Sub-Areas B, C, and E). The study area excludes most of Sub-Area D, which is now owned by the City of Newark, but includes a small segment of Area 3 encompassing a buffer of the Stevenson Boulevard extension that extends to the northeast of the Union Pacific Railroad (UPRR) tracks and just outside of Area 4 (Figure 2).

1.1.1 Site Access and Street Network

Furthering implementation of the Specific Plan, the Project applicant proposes to extend Stevenson Boulevard with a structural bridge over the UPRR tracks. The extension of Stevenson Boulevard would provide the primary vehicular and pedestrian access to the Area 4 residential development.

The extension of Stevenson Boulevard into Area 4 to its southwesterly terminus at a traffic roundabout is proposed as a two-lane public arterial street with a 60-foot-wide right-of-way including a 12-foot sidewalk, landscape strip, and two 10-foot-wide travel lanes each with 6-foot bike lanes.

Private street layouts planned for the internal street network include two 10-foot wide travel lanes with parking, sidewalks, and landscape strips.

There are five bridges planned within the development to avoid wetlands. All bridges would be pre-fabricated and would be installed in these areas as clearspan structures over the wetlands to avoid any wetland fill. In addition, a portion of the emergency vehicle access roadway (see description below) will be elevated on piers to avoid wetland fill (see Figure 2). The piers will be located outside the boundaries of the wetland.

1.1.2 Multi-Use Trail and Emergency Vehicle Access

On the north side of Area 4 (within Sub-Area D), a combined emergency vehicle access (EVA) roadway and pedestrian/bike trail from Mowry Avenue into Area 4 would be installed adjacent to the railroad tracks. Both the Stevenson Boulevard extension and the Mowry Avenue railroad crossing would provide pedestrian access connecting Areas 3 and 4.

A 12-foot-wide paved public multi-use trail would begin at the Stevenson Boulevard terminus roundabout and extend around most of the perimeter of the Area 4 residential development (the exception being the easternmost portion of the site along the UPRR tracks). At the northeast corner of Area 4, the multi-use path

would connect to the combined emergency vehicle access roadway and pedestrian/bike trail to Mowry Avenue just west of the railroad tracks. The access roadway would be locked and gated at Mowry Avenue to allow only emergency vehicles; however, the gate would allow passage of pedestrians and bicycles. The emergency vehicle access roadway/multi-use trail would be 20 feet wide. Along the east side of the trail, a vandal-resistant fence would separate the trail from the railroad right-of-way and the flood control channel. Within the residential development area, a masonry wall will extend along the UPRR right-of-way.

Any changes to the UPRR crossing at Mowry Avenue would be submitted for review and approval by the California Public Utilities Commission and UPRR.

1.1.3 Parking

Street parking for up to 883 vehicles will be provided throughout the development.

1.1.4 Drainage Plan

Stormwater runoff from residential development within Area 4 is designed to drain via new underground storm drain lines to various points along the perimeter of the development envelope where outfalls into bioretention areas would be constructed. Residential development in Area 4 will be elevated to 15 feet mean sea level, creating significant grade differential for gravity systems.

The Area 4 storm drain system is designed to be compliant with local and state stormwater treatment guidelines prior to discharge to a public system or wetland.

Runoff generated by the development's impervious surfaces will be directed through a pipe network and overland release to bioretention areas for treatment. Bioretention areas and the associated outfalls into the open space areas will be spaced consistently with the Specific Plan and will be spread out to approximately six locations.

1.1.5 Construction Activities

Development of Area 4 will require fill to be imported onto the residential areas to raise them out of the designated 100-year floodplain. In addition, the City's Municipal Code requires a minimum building pad elevation of 11.25 feet and a minimum top of curb elevation of 10.0 feet National Geodetic Vertical Datum 29 (NGVD 29). The fill for Area 4 is expected to come from soil excavated from local major construction projects, although some could be moved from higher elevation areas on the Project site to lower elevation areas. The residential lots, access roads, open space areas, and bridge have been designed to avoid the need to place fill in any wetland.

Minimum building pad elevations would be 13 feet NGVD 29 plus 1.9 feet, or approximately 15 feet NGVD 29. A total of approximately 1,674,650 cubic yards of fill are proposed to achieve the desired development grades within Area 4.

Section 2. Methods

As mentioned previously, one of the purposes of our assessment was to update information on biological resource conditions on the Project site that we had previously collected for the Specific Plan EIR so that our Project-specific impact assessment would be based on current site conditions. Consistent with CEQA, we specifically sought to determine whether the Project would result in any new or substantially more severe significant impacts to biological resources as compared to the impacts already identified and analyzed in the 2015 RFEIR. We accomplished this using several methods.

This document draws primarily on the information in the *Newark Areas 3 and 4 Specific Plan Project Recirculated Final Environmental Impact Report* (City of Newark 2015) to the extent that it is applicable to the current conditions. For this report, we evaluated the Project in light of current site conditions (which we determined as described below), and the applicable RFEIR mitigation measures. (For the convenience of the reader, the relevant biological mitigation measures from the RFEIR are reproduced in Appendix B of this report.)

As an initial phase of this analysis, H. T. Harvey & Associates biologists reviewed previous reports prepared for the study area by our company, including:

- *Newark General Plan Areas 3 & 4 Biotic Constraints and Opportunities Analysis* (H. T. Harvey & Associates 2006),
- *Newark Areas 3 and 4 California Tiger Salamander Aquatic Surveys* (H. T. Harvey & Associates 2007a),
- *Newark Areas 3 and 4 Preliminary Delineation of Wetlands and Other Waters* (H. T. Harvey & Associates 2007b),
- *Newark Areas 3 and 4 Specific Plan Biological Resources Report* (H. T. Harvey & Associates 2009), and
- *Newark Area 4 Biological Constraints Update for the Vernal Pool Tadpole Shrimp, California Tiger Salamander, and Salt Marsh Harvest Mouse* (H. T. Harvey & Associates 2015), as well as the
- *Newark Areas 3 and 4 Specific Plan Project Draft Environmental Impact Report* (City of Newark 2009),
- *Newark Areas 3 and 4 Specific Plan Project Final Environmental Impact Report* (City of Newark 2010),
- *Newark Areas 3 and 4 Specific Plan Project Recirculated Draft Environmental Impact Report* (City of Newark 2014), and RFEIR (City of Newark 2015).

Next, we reviewed more recent aerial photos and topographic maps; the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB 2018); and other relevant scientific literature, technical databases, and resource agency reports in order to assess the current distribution of special-status plants and animals in the Project vicinity. For the purposes of this report, the general vicinity of the study area is defined as the area within a 5-mile radius. As mentioned previously and shown in Figure 2, the study area is defined as the Project footprint as well as all portions of Area 4 located south of the Alameda County Flood Control & Water Conservation District Drainage Canal Line D (i.e., Sub-Areas B, C, and E), the location

of the proposed emergency vehicle access and pedestrian/bike trail to Mowry Avenue within Sub-Area D, and a small segment of Area 3 encompassing a buffer of the Stevenson Boulevard extension northeast of the UPRR tracks (453.57 acres). The Project footprint is defined as the areas subject to direct impacts by the proposed development (96.50 acres) and is shown on Figures 2 and 3.

For plants, in addition to reviewing past reports we also reviewed updates to the relevant databases including California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1A, 1B, 2A, and 2B lists occurring in the Project region, which is defined as the *Newark, California* U.S. Geological Survey 7.5-minute quadrangle and surrounding eight quadrangles (*San Leandro, Hayward, Dublin, Niles, Milpitas, Mountain View, Palo Alto,* and *Redwood Point, California*). In addition, we queried the CNDDB (2018) for records of special-status species and natural communities of special concern that occur within the Project region and that have been added since the 2015 RFEIR, and we perused recent records of birds reported in nearby areas, such as at Warm Springs Seasonal Wetland Unit of the Don Edwards San Francisco Bay National Wildlife Refuge (Warm Springs) and on eBird (Cornell Lab of Ornithology 2018).

H. T. Harvey & Associates biologists and ecologists have a long history of both intensive surveys of and regularly occurring site visits to Area 4, dating back to 2005. H. T. Harvey & Associates previously mapped habitats, including sensitive/jurisdictional habitats, and assessed potential for occurrence of special-status plants and animals within all of Area 4 (H. T. Harvey & Associates 2009); that mapping served as the basis for Areas 3 and 4 Specific Plan CEQA documents through the 2015 RFEIR. To confirm whether any changes to those site conditions had occurred since the 2015 RFEIR (and to document any such changes), H. T. Harvey & Associates professionals having a long history with Area 4 also conducted reconnaissance-level site visits to the study area on July 13, 2018 (David Gallagher), November 9, 2018 (Steve Rottenborn, Kelly Hardwicke, and Mark Bibbo), and December 27, 2018 (Robin Carle). During these site visits, H. T. Harvey ecologists walked and drove the project site so that 100% of the project site was observed. They compared existing conditions, in terms of the types of habitats present in each area, dominant plant species in those habitats, and boundaries of habitat types, to prior mapping of habitats and descriptions of habitats from the 2015 RFEIR, and they evaluated the potential suitability of those habitats for use by special-status species. During the site visits, we compared existing habitats to previously mapped habitats, using GIS-based map files from the RFEIR, the USACE-verified wetland delineation, and a GPS-equipped tablet running GIS Pro. The site visits confirmed that the type, extent, and location of habitat types in the study area are the same as those described in the RFEIR. For example, the vast majority of proposed development activities will occur in upland agricultural habitats that are adequately characterized by the description of upland agricultural habitats in the 2015 RFEIR. This report describes the relevant observations from those site visits regarding changes to habitat and species occurrence – separate reports were not prepared for each site visit. Site photos from the 2018 site visits are provided in Appendix A.

The results of all of these efforts to update site conditions are reflected in this report. This report then evaluates the potential impacts of the Project on biological resources, in light of the RFEIR, the RFEIR mitigation measures, and current site conditions.

Section 3. Environmental Setting

The RFEIR described the environmental setting for Area 4, and our multiple 2018 reconnaissance-level site visits determined that the environmental setting descriptions for the study area still apply (i.e., that the types, locations, and acreages of habitats currently present are the same as those described in the RFEIR). The RFEIR identified 10 biotic habitat/land cover types that occur in the current study area: upland agricultural (162.2 ac), agricultural field/seasonal wetland – saline to brackish (183.6 acres), agricultural field/seasonal wetland – brackish to fresh (7.2 acres), ruderal herbaceous field (33.5 acres), developed (2.6 acres), aquatic (29.1 acres), diked salt marsh (27.3 acres), brackish marsh (3.1 acres), seasonal wetland (2.8 acres), coastal scrub (2.2 acres). The extent of these habitats within the study area is shown on Figure 3.

Special-Status Species

The RFEIR describes the special-status plant and animal species with potential to occur in the study area. The majority of the previous analysis still applies, and is summarized below with minor changes to reflect current site conditions as well as updated occurrence information for special-status species with potential to occur in the study area; any such changes (relative to 2015 RFEIR conditions) to special-status species locations, potential for occurrence, or abundance that might influence this Project-specific impact assessment are specifically noted below.

As described under *Methods* above, information concerning threatened, endangered, or other special-status species that could occur in the study area was collected from several sources and reviewed by H. T. Harvey & Associates ecologists. The specific habitat requirements and the locations of known occurrences of each special-status species were the principal criteria used for inclusion in the list of species potentially occurring on the site. Figures 4 and 5 are maps showing the CNDDB's (2018) special-status plant and animal species records in the general vicinity of the study area, respectively. These generalized maps are valuable on a historical basis, but do not necessarily represent current conditions. While these records are not definitive, they show areas where special-status species occur or have occurred previously.

Special-Status Plants

The RFEIR identified the following eight sensitive plant species as having the potential to occur in the study area: Contra Costa goldfields, alkali milk-vetch, brittlescale, Condon's tarplant, Hoover's button-celery, prostrate vernal pool navarretia, Delta-wooly-marbles, and San Joaquin spearscale. Targeted, protocol-level surveys for spring-blooming special-status plant species were conducted by H. T. Harvey & Associates plant ecologists on 27 March and 3 April 2007 and for late-blooming special-status plant species on 26 and 27 July 2007 within a larger study area which fully encompassed the current study area. These surveys covered all suitable habitat for potentially occurring special-status plants on the site. In addition, H. T. Harvey & Associates plant ecologists specifically looked for special-status plant species concurrent with the wetland delineation field site visits conducted throughout the winter and spring seasons of 2005-2007. These reconnaissance-level rare

plant surveys conducted in concurrence with the wetland delineation site visits were performed within the flowering periods of the special-status plant species considered to potentially occur on the site and were conducted during years of both above-average and below-average rainfall. Protocol-level surveys were conducted by walking the entire Project site, with the exception of the diked salt marsh habitat, within suitable habitat (i.e., recently disked areas were not surveyed if no vegetation was growing within them) at speeds adequate to detect all vascular plant species. Reconnaissance-level surveys were conducted by walking specific portions of the Project site to monitor wetland hydrology. No special-status were observed within the current study area during any of these surveys.

Based on our 2018-19 background reviews and reconnaissance-level site visits described above, we determined that there has been no change since the 2014 RDEIR and 2015 RFEIR to the potential for occurrence on the Project site of special-status plant species that occur in the Project vicinity. As was the case in 2015, the Project footprint today consists of upland agricultural land which is actively disked and managed for upland hay, and the special-status plant species which have the potential to occur in the vicinity are unlikely to occur within this footprint.

The following table summarizes the eight species for which potential habitat is present in the study area, namely in higher quality seasonal wetlands, marsh and aquatic habitats that will be avoided in the proposed Project plan.

N:\Projects\2596-05\17\Reports\Bio Res Tech\Fig 3 Biotic Habitats.mxd

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Figure 3. Biotic Habitats
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Legend

Study Area

5-mile Radius

Critical Habitat

Contra Costa Goldfields

CNDDB Records

Plants

Specific Location

Approximate Location

General Area

Terrestrial Communities

General Area

hairless popcornflower

most beautiful jewelflower

long-styled sand-spurrey

slender-leaved pondweed

chaparral harebell

Sycamore Alluvial Woodland

Sycamore Alluvial Woodland

Congdon's tarplant

Congdon's tarplant

Sycamore Alluvial Woodland

chaparral ragwort

Northern Coastal Salt Marsh

Congdon's tarplant

long-styled sand-spurrey

San Joaquin spearscale

alkali milk-vetch

Contra Costa goldfields

saline clover

Congdon's tarplant

Congdon's tarplant

Congdon's tarplant

most beautiful jewelflower

most beautiful jewelflower

Northern Coastal Salt Marsh

San Joaquin spearscale

prostrate vernal pool navarretia

Contra Costa goldfields

Hoover's button-celery

Congdon's tarplant

California seablite

Contra Costa goldfields

Congdon's tarplant

Northern Coastal Salt Marsh

Congdon's tarplant

alkali milk-vetch

prostrate vernal pool navarretia

Congdon's tarplant

Point Reyes salty bird's-beak

lesser saltscale

saline clover

Contra Costa goldfields

Valley Oak Woodland

Valley Oak Woodland

California seablite

Northern Coastal Salt Marsh

Point Reyes salty bird's-beak

slender-leaved pondweed

lost thistle

round-headed Chinese-houses

alkali milk-vetch

Hoover's button-celery

Hoover's button-celery

saline clover

alkali milk-vetch

Point Reyes salty bird's-beak

Congdon's tarplant

Congdon's tarplant

Congdon's tarplant

Congdon's tarplant

Congdon's tarplant

Congdon's tarplant

Congdon's tarplant

arcuate bush-mallow

alkali milk-vetch

Congdon's tarplant

Hoover's button-celery

Franciscan onion

N 1.2 0.6 0 1.2 Miles

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Figure 4. CNDDB Plant Records

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Legend

Study Area

5-mile Radius

Critical Habitat

Vernal Pool Tadpole Shrimp

Western Snowy Plover

CNDDB Records

Wildlife

Specific Location

Approximate Location

General Area

Aquatic

General Area

Note: CTS = California Tiger Salamander, CRLF = California Red-legged Frog

N 1.2 0.6 0 1.2 Miles

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Figure 5. CNDDB Animal Records

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Table 1. Status and Potential Occurrence of Special-Status Plant Species in the Project Footprint

Name	Status	Habitat	Occurrence
Alkali Milk-vetch (*Astragalus tener* var. *tener*)	1B.1	Alkaline playas, valley and foothill grassland underlain by adobe clay, and vernal pool habitats.	**Determined to be Absent from the Project Footprint.** Potentially suitable habitat in the wider study area. The species was not observed during protocol or reconnaissance-level surveys. There is no habitat present within the Project footprint which consists of actively farmed uplands; further surveys are not warranted for purposes of impact assessment.
Brittlescale (*Atriplex depressa*)	1B.2	Alkaline, clay soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pool habitats.	**Determined to be Absent from the Project Footprint.** Potentially suitable habitat exists in the higher quality farmed wetlands and borders of the diked salt marsh in the wider study area. The species was not observed during protocol or reconnaissance-level surveys. There is no habitat present within the Project footprint which consists of farmed uplands; further surveys are not warranted for purposes of impact assessment.
Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*)	1B.2	Valley and foothill grassland, particularly those with alkaline substrates, and in sumps or disturbed areas where water collects.	**Determined to be Absent from the Project Footprint.** Potentially suitable habitat exists in the wider study area. The species was not observed during protocol or reconnaissance-level surveys. There is no habitat present within the Project footprint, which consists entirely of uplands; further surveys are not warranted for purposes of impact assessment.
Contra Costa Goldfields (*Lasthenia conjugens*)	FE, 1B.1	Mesic (moderate moisture regime) valley and foothill grasslands and vernal pools.	**Determined to be Absent from the Project Footprint.** Potentially suitable habitat exists in seasonal wetlands in the wider study area. The species was not observed during protocol or reconnaissance-level surveys. There is no habitat present within the Project footprint, which consists of actively farmed uplands; further surveys are not warranted for purposes of impact assessment.
Hoover's Button-celery (*Eryngium aristulatum* var. *hooveri*)	1B.1	Vernal pools.	**Determined to be Absent from the Project Footprint.** Potentially suitable habitat exists in the seasonal wetlands in the wider study area. The species was not observed during protocol or reconnaissance-level surveys. There is no habitat present within the Project footprint which consists of actively farmed uplands; further surveys are not warranted for purposes of impact assessment.

Name	Status	Habitat	Occurrence
Prostrate Vernal Pool Navarretia (*Navarretia prostrata*)	1B.1	Mesic coastal scrub, meadows and seeps, vernal pools, and alkaline valley and foothill grassland habitats.	**Determined to be Absent from the Project Footprint.** Potentially suitable habitat exists in the seasonal wetlands in the wider study area. The species was not observed during protocol or reconnaissance-level surveys. There is no habitat present within the Project footprint, which consists of actively farmed uplands; further surveys are not warranted for purposes of impact assessment.
Delta Woolly-marbles (*Psilocarphus brevissimus* var. *multiflorus*)	4.1	Vernal pools and flats.	**Determined to be Absent from the Project Footprint.** Potentially suitable habitat exists in the study area. The species was not observed during protocol or reconnaissance-level surveys. There is no habitat present within the Project footprint, which consists of actively farmed uplands; further surveys are not warranted for purposes of impact assessment.
San Joaquin Spearscale (*Etriplex joaquiniana*)	1B.2	Alkaline soils in chenopod scrublands, meadows and seeps, playas, and valley and foothill grasslands.	**Determined to be Absent from the Project Footprint.** Potentially suitable habitat exists in the higher quality farmed wetlands and borders of the diked salt marsh in the wider study area. There is no habitat present within the Project footprint which consists entirely of farmed uplands. The species was not observed during protocol or reconnaissance-level surveys; further surveys are not warranted for purposes of impact assessment.

California Rare Plant Rank (CRPR):

1B = Plants rare, threatened, or endangered in California and elsewhere; 4 = Plants of limited distribution; a watch list.

Threat Ranks

.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat), .2 = Moderately threatened in California (20–80% of occurrences threatened/moderate degree and immediacy of threat). .3 = Not very endangered in California.

Special-Status Animals

The RFEIR identified a number of special-status animal species that were considered for potential occurrence in the study area: the vernal pool tadpole shrimp (*Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), northern harrier (*Circus hudsonius*), white-tailed kite (*Elanus leucurus*), peregrine falcon (*Falco peregrinus anatum*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), Alameda song sparrow (*Melospiza melodia pusillula*), Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*), San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), tricolored blackbird (*Agelaius tricolor*), pallid bat (*Antrozous pallidus*), salt marsh wandering shrew (*Sorex vagrans*), and salt marsh harvest mouse (*Reithrodontomys raviventris*).

Seven additional special-status species were identified as potentially occurring downstream of Area 4 within Mowry Slough. These are the green sturgeon (*Acipenser medirostris*), Central Valley fall-run Chinook salmon

(*Oncorhynchus tshawytscha*), Central California Coast steelhead (*Oncorhynchus mykiss*), longfin smelt (*Spirinchus thaleichthys*), California Ridgway's rail (*Rallus obsoletus obsoletus*) (formerly the California clapper rail), California black rail, and Pacific harbor seal (*Phoca vitulina*).

Nine special-status species could occur as occasional foragers within the study area, but are not expected to use the site regularly, occur in large numbers, or breed there: the American white pelican (*Pelican erythrorhynchos*), golden eagle (*Aquila chrysaetos*), black tern (*Chlidonias niger*), California least tern (*Sternula antillarum browni*), Vaux's swift (*Chaetura vauxi*), bank swallow (*Riparia riparia*), yellow warbler (*Setophaga petechia*), grasshopper sparrow (*Ammodramus savannarum*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

Based on our 2018-19 background review and reconnaissance-level site visits, we determined that there has been no change to the potential for occurrence of the majority of special-status animal species that occur in the site vicinity since the 2009 Biological Resources Report was prepared or the 2015 RFEIR was certified. The only potential changes, which are discussed in greater detail below, pertain to the vernal pool tadpole shrimp, California black rail, burrowing owl, salt marsh harvest mouse, and salt marsh wandering shrew, although in all instances the Project is not expected to cause new significant or more severe effects to these species.

The following is a brief summary of the special-status wildlife species for which the habitat conditions and potential for occurrence described in the 2015 RFEIR remain unchanged:

- There are no new records of green sturgeon, longfin smelt, Central California Coast steelhead, Central Valley fall-run Chinook salmon, or harbor seal in the vicinity of the study area. The status of these species remains unchanged since the 2009 biological resources report was prepared and the 2015 RFEIR was certified. If individuals of these species should wander from the San Francisco Bay into lower Mowry Slough, they are not expected to swim upstream as far as Area 4 because there is no spawning habitat to migrate to within or upstream of the site, the water quality in upper Mowry Slough is likely relatively poor, and the portion of the channel along Area 4 is relatively narrow and shallow. Thus, these species are not expected to occur within or immediately adjacent to Area 4, although there is some possibility that individuals may occasionally forage downstream of the site in Mowry Slough.
- There are no new CNDDB records of the state and federally threatened California tiger salamander in the vicinity of the study area (CNDDB 2018), and the species has not been detected during annual surveys conducted by the U.S. Fish and Wildlife Service (USFWS) within a subset of the ponds in the Stevenson Unit of Warm Springs (Loredo 2018), which is located immediately east of the southeastern portion of the study area east of the UPRR tracks and south of Stevenson Boulevard. Annual monitoring of ponds farther south at Warm Springs has detected California tiger salamanders breeding in ponds approximately 0.6 mile southeast of the study area (USFWS 2014, Loredo 2015), which is 0.2 mile closer to the Project site than they were known to occur when the Biological Resources Report was prepared (H. T. Harvey & Associates 2009). According to USFWS biologist I. Loredo (2015), the ponds within the Stevenson Unit may be too saline to support tiger salamanders. In our opinion, due to the likely similarity in salinity between the ponds in the Stevenson Boulevard portion of the Warm Springs Unit and ponded areas on Area 4, we would

expect tiger salamanders to be breeding in the ponds on the Stevenson Boulevard portion of the Warm Springs Unit if they were breeding within Area 4. There continues to be some possibility that small numbers of California tiger salamanders could disperse to the study area from nearby populations, but as discussed in the RFEIR this likelihood is very low (H. T. Harvey & Associates 2007a).

- Several wintering state and federally endangered California's Ridgway's rails have been reported as far inland as the study area southeast of Area 4 by amateur birders since the Biological Resources Report was prepared (Cornell Lab of Ornithology 2018); however, no experienced birders or rail surveyors have ever recorded Ridgway's rails within the study area or as far inland along Mowry Slough as Area 4, despite extensive coverage of the area by birders for decades. There are no new confirmed records of the species within or near Area 4 since 2009 (CNDDB 2018, Cornell Lab of Ornithology 2018). California Ridgway's rails are known to occur in tidal marshes along lower Mowry Slough approximately 2.4 miles downstream of the study area; however, no tidal salt marsh habitat to support this species is present within or adjacent to Area 4, and California Ridgway's rails are not expected occur within or near the study area.

- The tricolored blackbird is considered a threatened species under the California Endangered Species Act (in 2015, it was a state species of special concern). There are no new breeding records of this species in the vicinity of Area 4. Habitat conditions within Area 4 remain unchanged since 2009, and there continues to be some possibility that a colony of tricolored blackbirds could nest in the dense cattails (*Typha* sp.) and tules (*Scirpus* sp.) along the eastern edge of the diked salt marsh around the former Pintail Duck Club.

- The status of the northern harrier, loggerhead shrike, Alameda song sparrow, Bryant's savannah sparrow, and San Francisco common yellowthroat, which are state species of special concern; and the white-tailed kite and American peregrine falcon, which are state fully protected species, remains unchanged since the 2009 Biological Resources Report was prepared and the 2015 RFEIR was certified. All of these species continue to occur in Area 4, and can potentially nest in the study area.

- The status of the California least tern, a state and federally endangered species; the bank swallow, a state threatened species; the American white pelican, black tern, Vaux's swift, yellow warbler, grasshopper sparrow, and Townsend's big-eared bat, which are California species of special concern; and the golden eagle, a state fully protected species, remains unchanged since the 2009 Biological Resources Report was prepared and the 2015 RFEIR was certified. These species may occasionally forage within the study area, but are not expected to occur regularly, occur in large numbers, or breed there.

- Several structures and trees are present within the northwestern portion of Area 4 (outside the study area) and provide potential roosting sites for the pallid bat (*Antrozous pallidus*), a state species of special concern, and the Yuma myotis (*Myotis yumanensis*), an uncommon species in the South Bay. However, no structures or trees remain within or near the Project development area to provide suitable roosting sites for these species (i.e., the residence just south of the intersection of Stevenson Boulevard and the Union Pacific railroad and the two agricultural structures in the eastern portion of Area 4 discussed in the 2009 Biological Resources Report are no longer present). Individual pallid bats and Yuma myotis may occasionally forage over the Project site, but they do not roost on the site and are not expected to be affected by the Project.

Expanded discussions are provided below for the vernal pool tadpole shrimp, California black rail, burrowing owl, salt marsh harvest mouse, and salt marsh wandering shrew, as new occurrence information is available for these species and/or the extent of suitable habitat for this species within Area 4 has changed since the 2009 Biological Resources Report was prepared and the 2015 RFEIR was certified.

Vernal Pool Tadpole Shrimp (*Lepidurus packardi*). Federal Listing Status: Endangered; State Listing Status: None. Vernal pool tadpole shrimp are not known to occur in Area 4 (CNDDB 2018). Vernal pool tadpole shrimp are known to occur in the Stevenson Boulevard unit of Warm Springs, where 29 pools were inoculated with cysts of the species in 2003. In 2008, vernal pool tadpole shrimp were detected at Warm Springs, but wet and dry season surveys for this species conducted in 2006–2008 in Area 4 did not detect any evidence of vernal pool tadpole shrimp (Arnold 2006, Helm Biological Consulting 2008). These results indicate that vernal pool tadpole shrimp were absent from Area 4, likely because the wetlands on the site that seasonally pond water are too saline to support the species. Based on these survey results, the RFEIR determined that vernal pool tadpole shrimp are absent from Area 4 due to a lack of suitable habitat.

The CNDDB identifies one new occurrence of vernal pool tadpole shrimp in the vicinity of Area 4 since the 2009 Biological Resources Report was prepared: the species was detected in a seasonal pool on PG&E property approximately 0.4 mile northeast of Area 4 in 2016 (CNDDB 2018, Figure 5). Ongoing monitoring of pools at Warm Springs continues to document the presence of vernal pool tadpole shrimp at the Stevenson Boulevard unit, and the species was detected there in 2017 (USFWS 2017). As a result, the Warm Springs ponds could serve as a source population for colonization of the study area if suitable habitat were present in the study area. However, despite the extent of seasonal wetland habitat within Area 4, the site was determined to be unsuitable for vernal pool tadpole shrimp because the wetlands in Area 4 do not pond water (i.e., they are saturated but not inundated), are too saline for the species, and/or are perennial (H. T. Harvey & Associates 2015). Thus, although there are recent records of vernal pool tadpole shrimp in the vicinity of Area 4, based on the negative protocol-level survey results and unsuitable site conditions, vernal pool tadpole shrimp are still considered absent from Area 4.

California Black Rail (*Laterallus jamaicensis coturniculus*). Federal Listing Status: None; State Listing Status: Threatened. The California black rail reportedly nested in the South Bay in the early 1900s (Wheelock 1916), but at the time the Biological Resources Report was prepared in 2009 it was known in the South Bay primarily as a nonbreeding winter resident. The 2009 Biological Resources Report and 2015 RFEIR stated that small numbers of black rails could forage in the diked salt marsh on the former Pintail Duck Club on Area 4, or in the marshes along Mowry Slough adjacent to and downstream from the Project area, in winter.

Black rails started to appear in the South Bay during the breeding season only as recently as 2012, when they were detected in Triangle Marsh approximately 3.2 miles south of Area 4 (Hall 2013). Since then, small numbers of black rails have been detected oversummering and breeding in the South Bay, with their numbers gradually increasing each year (CNDDB 2018, Cornell Lab of Ornithology 2018). However, even as recently as 2015, the species was known to summer in the South Bay only in low numbers and primarily in the Alviso area.

Our updated review of CNDDB records[1] revealed a record of a single California black rail detected calling from the diked salt marsh habitat at the former Pintail Duck Club within Area 4 on March 12, 2013 (CNDDB 2018). The closest other known records of black rails are located approximately 2.6 miles to the south along Coyote Creek and approximately 3.0 miles to the west along Plummer Creek (CNDDB 2018, Cornell Lab of Ornithology 2018). Black rails likely occur along Coyote Creek and Plummer Creek more frequently and in higher numbers compared to Area 4 due to the presence of larger areas of higher-quality marsh habitat that are connected with other marshes around the Bay. In contrast, the marsh habitat in Area 4 is located farther inland and is isolated from larger, higher-quality areas of marsh habitat by several miles of salt ponds and agricultural fields. The black rail heard calling on March 12, 2013 may have been a wintering bird that had not yet migrated to its breeding areas. Nevertheless, based on the recent increased presence of this species in higher quality habitats in the South Bay, it is our opinion that the diked salt marsh habitat within Area 4 provides potential nesting habitat for up to one or two pairs of California black rails, and individual black rails could forage within this habitat year-round.

Burrowing Owl (*Athene cunicularia*). Federal Listing Status: None; State Listing Status: Species of Special Concern. Burrowing owls were previously known to occur in the study area, and four pairs of owls were detected within the study area during protocol-level surveys conducted in 2006 (H. T. Harvey & Associates 2009). Protocol-level surveys conducted in 2007 detected no owls in the study area, but two owls were incidentally observed occupying a burrow in the northern portion of the study area in August 2008 (H. T. Harvey & Associates 2009). Protocol-level surveys of the study area have not been conducted since 2008, and the number of owls that occupy the study area currently is unknown. However, burrowing owls that occurred within the study area historically have typically occupied burrows on levee banks (outside of wetlands and disked area) and were easily detectable, yet no owls have been incidentally observed during site visits since 2008. This lack of observations suggests that the number of owls that occupy the study area has declined since the 2009 Biological Resources Report was prepared. Such a decline would be consistent with the regional decline in burrowing owl populations in the South Bay over the past several decades.

Burrowing owls were known to occur on PG&E property immediately across the UPRR tracks and southeast of the study area as recently as 2011 (with no owls detected in 2015 or 2016), in Area 3 (lands of Ohlone College) as recently as 2012, and in the Stevenson Unit of Warm Springs approximately 0.7 mile southeast of the study area as recently as 2018 (CNDDB 2018, Cornell Lab of Ornithology 2018). Surveys of the breeding population of burrowing owls at Warm Springs, which includes 719 acres and is located approximately 0.7–1.7 miles southeast of the study area, documented eight nesting pairs in 2014, three nesting pairs in 2015, five nesting pairs in 2016, and six nesting pairs in 2017 (USFWS 2017). However, other than the Warm Springs population, there are no records of burrowing owls in the study area vicinity since 2012 (CNDDB 2018, Cornell Lab of Ornithology 2018).

[1] We last reviewed CNDDB for this project in October 2015 (H. T. Harvey & Associates 2015). The 2013 record of a California black rail in Area 4 was not in CNDDB at that time and therefore must have been entered since October 2015.

Habitat conditions for burrowing owls within the study area are relatively unchanged since the 2009 Biological Resources Report was prepared and the 2015 RFEIR was certified. Burrows of California ground squirrels (*Otospermophilus beecheyi*) continue to be present on the sides of levees, and along the UPRR tracks, which provide suitable nesting and roosting sites for this species. However, no owls have been observed within the study area or immediate vicinity since 2008, and owls have not been detected on adjacent lands since 2012. Based on the lack of recent records within and adjacent to the study area, the local population of owls appears to have declined since the preparation of the 2009 Biological Resources Report and certification of the 2015 RFEIR, and we do not know whether the species currently nests within the study area at all. Nevertheless, a population of burrowing owls is present at Warm Springs as close as 0.7 mile from the study area, and there is some possibility that owls could disperse to the study area and nest or roost in burrows within or adjacent to the Project site. Based on the evident decline in the local population of burrowing owls in the vicinity, no more than four pairs of owls (i.e., the number of owls detected during the 2006 protocol-level surveys) are expected to be present within the study area currently, and the actual number of breeding pairs is likely much lower.

Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*). Federal Listing Status: Endangered; State Listing Status: Endangered. The federally endangered salt marsh harvest mouse is known to occur in the diked salt marsh habitat in the former Pintail Duck Club in the Area 4 study area. Tidal salt marsh habitat along Mowry Slough adjacent to the study area also provides suitable habitat for this species, and salt marsh harvest mice can also potentially occur in the agricultural field/seasonal brackish marsh habitat adjacent to the diked salt marsh habitat, especially where regular disking does not occur and pickleweed is present.

The CNDDB (2018) does not list any new records of salt marsh harvest mice on or in the vicinity of Area 4 since the 2015 certification of the RFEIR (Figure 5). Our 2018 site visits updated the extent of potential habitat for salt marsh harvest mice within the agricultural field/seasonal wetland – saline to brackish habitat adjacent to the former Pintail Duck Club based on the current extent of disking in the study area (Figures 3 and 6). The diked salt marsh in the west-central portion of Area 4, which is dominated by pickleweed and other salt-marsh plants, offers high-quality habitat for the salt marsh harvest mouse, and we assume (as did the RFEIR) that this habitat area is occupied by the species. Pickleweed is also present, and the salt marsh harvest mouse may thus be present, in a ditch along the north side of the agricultural road running east-west in the central portion of Area 4; along the ditch that follows the southeastern border of Area 4; along a remnant slough leading northeastward from the pump in the southern part of Area 4; and in an isolated, limited areas of seasonal wetlands in the east-central part of Area 4. These habitat remnants provide relatively low-quality habitat due to their narrow and/or isolated nature and the unsuitability of adjacent agricultural habitat, but salt marsh harvest mice could occur in these areas. Salt marsh harvest mice are also presumed to be present throughout the marshes along Mowry Slough adjacent to and downstream from Area 4.

Aside from the updated habitat map, which expands the area of suitable habitat for salt marsh harvest mouse slightly compared to 2009 site conditions, no new evidence suggests that salt marsh harvest mice occur more or less extensively in the study area than is described in the RFEIR. As stated in the RFEIR, unless trapping surveys are performed to determine whether salt marsh harvest mice are present or absent within any of the

pickleweed habitat in the study area, we assume that salt marsh harvest mice could be present in the patches of pickleweed in the study area. As described in the RFEIR, there is also some potential for this species to occur in narrow strips of well-vegetated agricultural habitats and ruderal areas adjacent to pickleweed-dominated habitats, even where these areas do not contain pickleweed, although such areas do not provide high-quality habitat for salt marsh harvest mice. Such areas, which are not shown in Figure 6, are of limited occurrence in the study area, being confined to narrow strips immediately adjacent to pickleweed-dominated areas and to ruderal habitat adjacent to the seasonal wetlands in the east-central part of the site.

Salt Marsh Wandering Shrew (*Sorex vagrans*). Federal Listing Status: None; State Listing Status: Species of Special Concern. The salt marsh wandering shrew is not known to occur within the study area; however, because the shrew's typical habitat is similar to that of the salt marsh harvest mouse, the shrew may occur in the same areas as the salt marsh harvest mouse, shown in the updated habitat map on Figure 6.

Sensitive Habitats

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 (CNDDB 2018). 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 California. Natural communities are defined using NatureServe's standard heritage program methodology as follows (CDFW 2018):

G1/S1: Less than 6 viable occurrences or less than 2,000 ac.

G2/S2: Between 6 and 20 occurrences or 2,000 to 10,000 ac.

G3/S3: Between 21 and 100 occurrences or 10,000 to 50,000 ac.

G4/S4: The community is apparently secure, but factors and threats exist to cause some concern.

G5/S4: The community is demonstrably secure to ineradicable due to being common throughout the world (for global rank) or the state of California (for state rank).

State rankings are further described by the following threat code extensions:

S1.1: Very threatened

S1.2: Threatened

S1.3: No current threats

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. If an alliance is marked G1-G3, all the vegetation associations within it will also be of high priority. The CDFW provides the Vegetation Classification and Mapping Program's (VegCAMP) currently accepted list of vegetation alliances and associations (CDFW 2018).

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, Habitats, and Vegetation Alliances. Based on our 2018-19 background review and reconnaissance-level site visits, we determined that there were no new sensitive natural communities, habitats, and/or vegetation alliances either defined by agencies or detected in the study area since the 2009 Biological Resources Report was prepared or since the 2015 RFEIR was certified. Previous analyses identified a single mapped CDFW sensitive natural community, northern coastal salt marsh (Rank G3/S3.2), as occurring in the study area. Northern coastal salt marsh, which includes those habitats defined as diked salt marsh in Figure 3, occurs around the aquatic habitats in the former Pintail Duck Club and as narrow bands along levees, drainage channels, and ditches. All northern coastal salt marsh in the study area qualifies as a *Sarcocornia pacifica* (*Salicornia depressa*) (Pickleweed mats) Alliance. This alliance is ranked as G4/S3, meaning there are greater than 100 viable occurrences worldwide and/or more than 12,950 hectares, and there are 21-100 viable occurrences statewide and/or more than 2,590-12,950 hectares (Sawyer et al. 2009). As a G4 alliance, the vegetation is considered "*secure, but factors and threats exist to cause some concern.*" Thus the northern coastal salt marsh in the study area qualifies as a sensitive vegetation alliance (CDFW 2019). Other mapped habitats within the study area that would be considered sensitive natural communities include the aquatic, brackish marsh, and seasonal wetland habitats, which are also considered waters of the U.S and are discussed below.

Waters of the U.S./State. Based on our 2018-19 background review and reconnaissance-level site visits, we determined that there has been no change to the extent and boundaries of waters of the U.S./State in the study area since the 2009 Biological Resources Report was prepared or since the 2015 RFEIR was certified. Areas meeting the regulatory definition of "Waters of the U.S." (jurisdictional waters) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as "Waters of the U.S.," tributaries of waters otherwise defined as "Waters of the U. S.," the territorial seas, and wetlands (termed Special Aquatic Sites) adjacent to "Waters of the U.S." (33 CFR, Part 328, Section 328.3). Wetlands on non-agricultural lands are identified using the *Corps of Engineers Wetlands Delineation Manual*

(Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Regional Supplement) (USACE 2008).

Areas not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions (33 CFR, Part 328).

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must be in compliance with permit requirements of the USACE. No USACE permit will be effective in the absence of state water quality certification pursuant to Section 401 of the Clean Water Act. The State Water Resources Control Board is the state agency (together with the Regional Water Quality Control Boards [RWQCB]) charged with implementing water quality certification in California.

Approximately 253.18 acres of jurisdictional wetlands and waters have been delineated within the current study area. These areas include all aquatic, diked salt marsh, seasonal wetlands, freshwater marsh, and brackish marsh, present on the site. The Project has been designed to avoid all direct impacts to Waters of the U.S./State.

Bay Conservation and Development Commission. The San Francisco Bay Conservation and Development Commission (BCDC) is a California state agency that has jurisdiction over the open water, marshes, and mudflats of the greater San Francisco Bay including the following: the first 100 ft inland from the shoreline around San Francisco Bay, the portion of the Suisun Marsh below the 10-ft contour line, portions of most creeks, rivers, sloughs, and other tributaries that flow into San Francisco Bay, salt ponds, duck hunting preserves, game refuges, and other managed wetlands that have been diked off of San Francisco Bay. BCDC approval must be obtained before placing solid material, building or repairing docks or other structures, dredging or extracting material from the Bay bottom, substantially changing the use of any structure or area, constructing, remodeling, or repairing any structure, and/or subdividing property or grading land.

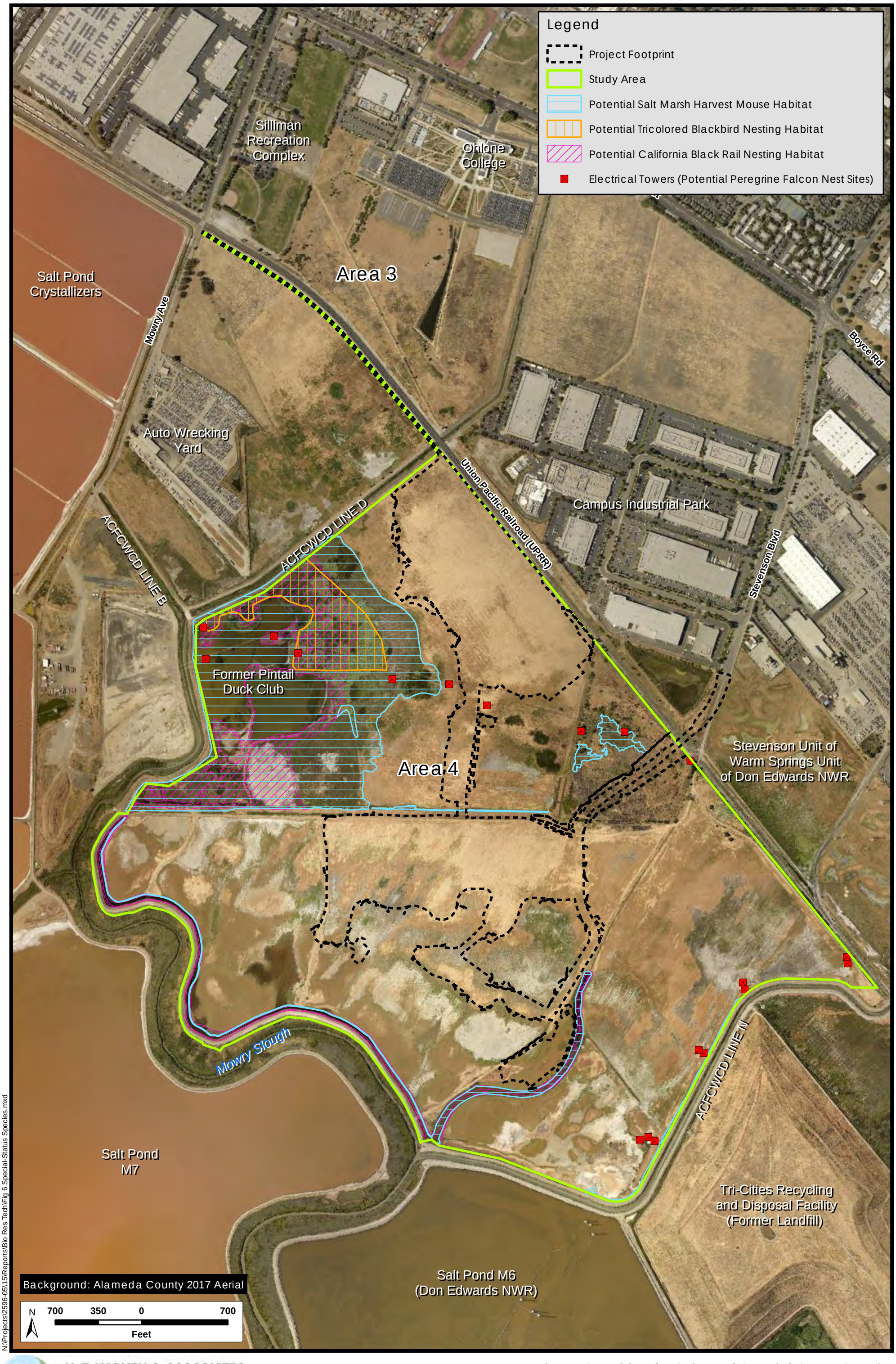
The BCDC may claim jurisdiction over Mowry Slough, the only fully tidal waterway near the Project site. Should Mowry Slough fall under the BCDC Bay jurisdiction, all land within 100 ft of Mowry Slough would constitute part of the BCDC Shoreline Band. Any impacts to Shoreline Band lands will require a permit from the BCDC. The ACFCD channels and all other ditches on the site are not fully tidal, and, as such, do not fall under the Bay jurisdiction of the BCDC. It is also possible that BCDC would claim all or some portion of the wetlands in and near the Pintail Duck Club as Managed Wetlands. There are no other areas within the Project site that are expected to fall under BCDC jurisdiction.

Based on our 2018-19 background review and reconnaissance-level site visits, we determined that there has been no change to the extent and location of the Bay Shoreline used to determine the 100-ft Shoreline Band or Bay BCDC jurisdiction since the 2009 Biological Resources Report was prepared or since the 2015 RFEIR was certified.

City of Newark Tree Ordinance. The City of Newark maintains and enforces a tree ordinance to protect the existing trees within the City. Under the ordinance, no person shall cut down, destroy, remove or move any tree which shall include any live woody plant having one or more well defined perennial stems with a trunk diameter of 6 inches or greater, measured at 4 ft above ground level growing within the city limits on any parcels of land except developed residential parcels of land 10,000 ft^2 or less in area, unless a permit to do so has been obtained from the public works director (Ord. 63 Section2 [part], 1979).

Following investigation, a tree removal permit shall be issued unless the public works director finds that any such tree is in a reasonably healthy condition and is necessary in order to preserve the health, safety and welfare of a substantial number of persons in the community by serving a windbreak function; or that the public interest will be otherwise unduly prejudiced by the destruction or removal of any such tree; and that the public interest in preservation of any such tree is not outweighed by the individual hardship on the applicant in the event the application is denied. In applying the standards set forth in this chapter, nothing shall be deemed to prevent the public works director from issuing a permit to destroy or remove part of the trees involved in an application, while denying a permit as to the remainder (Ord. 163 § 2 [part], 1979).

Based on our 2018-19 background review and reconnaissance-level site visits, we determined that there has been no change to the presence of ordinance-sized trees in the study area since the 2009 Biological Resources Report was prepared or since the 2015 RFEIR was certified. A formal tree survey was not conducted as part of this biological report. However, several ordinance-sized trees do still occur within the current study area. If these trees are to be removed, a permit from the City of Newark will be required.



N:\Projects\2596-05\15\Reports\Bio Res Tech\Fig 6 Special-Status Species.mxd

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 6. Habitat for Selected Special-Status Species
Newark Area 4 Biological Resources Technical Report (2596-17)
July 2019

Section 4. Impacts and Mitigation Measures

The State CEQA Guidelines provide direction for evaluating the impacts of projects on biological resources and determining which impacts will be significant. CEQA defines a "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Under State CEQA Guidelines Section 15065, a project's impacts on biological resources are deemed significant if the project would:

- "substantially reduce the habitat of a fish or wildlife species"
- "cause a fish or wildlife population to drop below self-sustaining levels"
- "threaten to eliminate a plant or animal community"
- "reduce the number or restrict the range of a rare or endangered plant or animal"

In addition to the Section 15065 criteria that trigger mandatory findings of significance, 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 the 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, or 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"

In general, impacts of the proposed Project are expected to be less extensive than those described in the RFEIR because (1) the Project does not propose development of all Sub-Areas of Area 4, (2) the Project will avoid

direct impacts on wetlands, and (3) the Project's development area is substantially smaller (and farther away from sensitive areas), and the Project will construct substantially fewer single family homes, compared to the development approved in the Specific Plan and analyzed in the RFEIR. We identified no new significant impacts (i.e., impacts that were not identified in the 2015 RFEIR as potentially significant) and no previously identified significant impacts which are now substantially more severe. The applicable mitigation measure from the RFEIR, would continue to reduce impacts to the same or lower levels than discussed in the RFEIR. Pre-existing mitigation measures from the RFEIR are included in Appendix B.

Impacts on Upland Agriculture, Ruderal Herbaceous Field, Developed, and Coastal Scrub Habitat (Less than Significant)

Impacts of development under the Specific Plan on up to 156.6 acres of upland agricultural areas, 43 acres of ruderal herbaceous field, 23.7 acres of developed habitat, and 2.2 acres of coastal scrub habitat were considered less than significant under the RFEIR. As discussed in the RFEIR, these habitats are regionally abundant, and the associated plant and wildlife species that occur in these areas represent a very small proportion of regional populations. In addition, although these upland habitats provide a buffer or transition area upslope from wetlands and marshes, this habitat is of relatively low quality due to regular disturbance from agricultural activities (i.e., disking). Therefore, these impacts were considered less than significant under CEQA.

The proposed Project would impact up to 90.3 acres of upland agricultural areas, 3.6 acres of ruderal herbaceous field, 0.9 acres of developed habitat, and 0.6 acres of coastal scrub habitat through grading and construction of new residences, roadways, and parking areas. In short, impacts of the Project on these habitats would be substantially less than the impacts analyzed in the RFEIR. No new or substantially more severe significant impacts on these habitats or associated plant and wildlife species were identified during this assessment of the Project. Therefore, these impacts would remain less than significant.

Physical Disturbance or Loss of Seasonal Wetland, Freshwater Marsh, Brackish Marsh, Detention Basin, and Aquatic Habitat (Less than Significant)

Previously, H. T. Harvey & Associates' biologists surveyed the Specific Plan site for wetland habitats and completed a formal wetland delineation that was verified by the USACE in 2007 (File # 2006-400075S). The extent and distribution of the various aquatic and wetlands habitat types are shown on Figure 3. Most of the seasonal wetlands, aquatic habitats, and diked salt marsh that were anticipated in the Specific Plan land use plan to be filled were determined to be of poor or marginal quality, primarily due to intensive and ongoing agricultural disturbance and the resulting effects on plant communities and wildlife use.

Seasonal wetlands, even in agricultural areas, have been increasingly lost to development in the South Bay. Open, moist field habitat that was historically used as alternate foraging habitat for shorebirds during high tides (when favored intertidal foraging habitat was inundated) has also declined. Although salt ponds currently serve

as surrogates for these seasonal wetlands from the perspective of high-tide use by shorebirds, planned restoration of at least some salt ponds in the South Bay by the South Bay Salt Ponds Restoration Project (which does not include the Newark salt ponds closest to Area 4) may reduce the extent of such salt ponds in the area.

The impacts of the development authorized by the Specific Plan, as analyzed in the 2015 RFEIR, included the filling or loss of up to 78 acres of seasonal wetland, 5.5 acres of aquatic, 0.9 acres of brackish marsh, and 1.2 acres of detention basin due to grading fill and development in Area 4. The RFEIR prescribed mitigation measures (BIO-1.1 – 1.3[2]) to reduce these impacts to less than significant.

In contrast, the proposed Project footprint has been designed to avoid filling or directly impacting any wetland, aquatic, marsh, or detention basin habitat. Therefore, all previously anticipated impacts to such aquatic resources have been avoided, and no new or substantially more severe significant impacts on these habitats or associated plant and wildlife species were identified during the current assessment of the Project. As a result, implementation of RFEIR Mitigation Measures BIO-1.1 through BIO-1.3 is not required for the Project.

Indirect impacts on seasonal wetland, marsh, and/or aquatic habitat from altered site hydrology and freshwater inputs are discussed below.

Impacts of Alteration of Site Hydrology on Avoided Wetlands and Associated Species (Less than Significant)

As analyzed in the RFEIR, implementation of the Specific Plan was anticipated to result in hydrologic alterations within Area 4 that could affect the wetland and marsh habitats within the study area. The addition of impervious surfaces through the construction of buildings and roadways and the compaction of soil would result in significant changes in the amount, location, quality, and velocity of stormwater runoff flowing into existing wetland habitats. Stormwater discharged into natural habitats at concentrated levels would increase the likelihood of soil erosion and channelization, and impacts related to water quality. If stormwater runoff is diverted to storm drains, the water level of seasonal wetlands would be reduced and changes in the preserved natural habitats would be substantial. Residential development in Area 4 may affect the amount, location, velocity, and timing of water entering natural habitats adjacent to the developed areas, potentially resulting in the reduction of the extent of existing seasonal wetland habitat. Depending on the location of development, some seasonal wetland habitat may no longer be actively farmed, particularly areas of seasonal wetland and brackish marsh adjacent to the area that may be developed into "islands" of seasonal wetland habitat that will be preserved within development. The increased quantity and velocity of water entering these seasonal wetland islands may cause these seasonal wetlands to pond for longer duration, changing the dominant vegetation and perhaps creating areas of open water. Conversely, if runoff is diverted around these wetlands, they could be hydrologically "starved". In addition, as these features fill with water and then spill into upland habitat adjacent

[2] All mitigation measure numbers discussed in this document match the original impact and measure numbering in the 2015 RFEIR. As noted at the beginning of Section 2 of this report, for the convenience of the reader all relevant biological resource mitigation measures from the RFEIR are reproduced in Appendix B.

to these wetlands, erosion or channelization may occur if outfalls and transition culverts are not correctly placed, converting upland or seasonal wetland habitat into aquatic habitat.

All of the potential effects described above could impact special-status species such as the salt marsh harvest mouse, salt marsh wandering shrew, Alameda song sparrow, Bryant's savannah sparrow, and San Francisco common yellowthroat. Changes in hydrology that result in a degradation of habitat for these special-status species would be considered a significant impact. The RFEIR prescribed Mitigation Measures (MM BIO-2.1 through MM BIO-2.5) to reduce these potential impacts to a less than significant level.

The proposed Project would not cause any new or substantially more severe significant impacts from those analyzed in the RFEIR. Impacts of the proposed Project on wetland-associated species from alteration of site hydrology are expected to be similar in kind, albeit less extensive (due to the smaller impact area) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement these same RFEIR mitigation measures (MM BIO-2.1 through MM BIO-2.5), is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

Impacts of Freshwater Inputs on Salt Marsh Habitat and Associated Species (Less than Significant)

As analyzed in the RFEIR, implementation of the Specific Plan was anticipated to result in increased inputs of freshwater from development areas to the surrounding, existing salt marsh habitats on-site. Salt marsh habitats provide habitat for special-status species. Increased stormwater runoff could potentially contribute to the conversion of salt marsh habitat to brackish or freshwater habitat, affecting special-status species, including the California Ridgway's rail, California black rails, salt marsh harvest mice, harbor seals, several special-status fish, and others. Special-status plant species that could potentially occur in wetter areas of the study area outside of the Project footprint could also be affected. Project-induced changes in salinity that result in degradation of habitat for special-status species would be a significant impact. The RFEIR prescribed Mitigation Measure MM BIO-3.1 to reduce these potential impacts to a less than significant level.

Changes in the salinity of stormwater discharges from the site to Mowry Slough will have negligible impacts during major storms or as a result of summer nuisance flows due to the existing large output of fresh water through the ACFC&WCD channels to Mowry Slough. As a result, this Project is not expected to result in conversion of salt marsh habitat in Mowry Slough through increased freshwater output.

The proposed Project would not cause any new or substantially more severe significant impacts from those analyzed in the RFEIR. Impacts of freshwater inputs on salt marsh habitat, particularly to the diked salt marsh habitat in the former Pintail Duck Club area in the west-central portion of the study area, and associated species are expected to be similar in kind, albeit less extensive (due to the smaller impact area) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement this same RFEIR mitigation

measure (MM BIO-3.1), is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

Impacts on Certain Potentially Breeding Special-Status Wildlife Species and their Habitats (Less than Significant)

Impacts of development under the Specific Plan on the northern harrier, white-tailed kite, loggerhead shrike, Alameda song sparrow, Bryant's savannah sparrow, and San Francisco common yellowthroat were considered less than significant in the RFEIR. As discussed in the RFEIR, development would result in the loss of nesting and foraging habitat for these species; construction activities could potentially disturb one to several nests of each; these species may be affected by domestic animals such as cats that increase following development; trees planted in residential areas could provide additional perches and nest sites for raptors that may prey on special-status species; and recreational activities by residents and guests may disturb these species and their habitats. However, the numbers of these species that would be disturbed or displaced due to Specific Plan development and associated effects represent a small fraction of their regional populations, and impacts would not meet the CEQA standard of having a *substantial* adverse effect on these species' populations.

The proposed Project would not cause any new or substantially more severe impacts on these six species from those analyzed in the RFEIR. Impacts of the proposed Project on nesting and foraging habitat for northern harrier, white-tailed kite, loggerhead shrike, Alameda song sparrow, Bryant's savannah sparrow, and San Francisco common yellowthroat within Area 4 due to the development of natural areas and disturbance from construction are expected to be similar in kind, albeit far less extensive (due to the smaller impact area) than, those anticipated in the Specific Plan and RFEIR. Therefore, these impacts would remain less than significant under CEQA.

Although the California black rail is not known to breed in the study area, there is some potential that it could breed there now or in the future. The distribution of black rails in the South Bay has expanded since the 2009 Biological Resources Report was prepared and the 2015 RFEIR was certified, and this species is now known to nest and occur year-round in some South Bay marshes, with their numbers gradually increasing. A California black rail was heard calling at the former Pintail Duck Club within Area 4 in March 2013, and though that bird may have been a lingering wintering bird, the possibility that this species may nest in the study area cannot be ruled out.

No suitable nesting habitat for black rails occurs within the Project development footprint, as the habitat within the Project impact area is agricultural and regularly disked/devoid of vegetation. There is some potential for this species to nest within the highest-quality diked salt marsh habitat in the former Pintail Duck Club, and a small portion of the Project development is located as close as 160 feet from the southeast corner of that habitat. As explained in Section 3, above, in our opinion the diked salt marsh habitat within Area 4 provides

potential nesting habitat for up to one or two pairs of California black rails, and individual black rails could potentially forage within this habitat year-round.

Specific Plan Policy 6-8[3] requires that construction-related impacts to such species be minimized. To implement this requirement, for those small portions of the Project located within 500 feet of the diked salt marsh habitat, the Project will either commence construction between September 1 and January 31 (which is outside the nesting season for this species) and have construction remain continuous thereafter, or commence construction between February 1 and August 31 if pre-construction surveys do not find evidence of active nesting of such species within 500 feet. With the implementation of these measures, Project impacts on any nesting black rails would be less than significant.

Indirect impacts on nesting and foraging habitat for California black rails as a result of post-construction human presence and activities resulting from the Project are also not significant. Black rails are known to nest and forage at the Alviso Marina County Park, which has experienced recent development (a new parking lot and marina) and increases in human uses over the past several years, and rail numbers there have nevertheless been increasing since 2013 (CNDDB 2018, Cornell Lab of Ornithology 2018). This indicates that black rails can habituate to the presence of human activities in nearby areas. Given the habituation of black rails at the Alviso Marina County Park to relatively high human use, Project development and increased human uses of adjacent trails and levees is not expected to significantly affect the use of the site by black rails, and impacts would be less than significant.

Impacts on Certain Nonbreeding Special-Status Wildlife Species and their Habitats (Less than Significant)

Impacts of development under the Specific Plan on the American white pelican (*Pelican erythrorhynchos*), golden eagle (*Aquila chrysaetos*), black tern (*Chlidonias niger*), California least tern (*Sternula antillarum browni*), Vaux's swift (*Chaetura vauxi*), bank swallow (*Riparia riparia*), yellow warbler (*Setophaga petechia*), grasshopper sparrow (*Ammodramus savannarum*), and Townsend's big-eared bat (*Corynorhinus townsendii*) were considered less than significant in the RFEIR. Project construction under the Specific Plan would not result in the injury or mortality of individuals of these species, which are mobile enough to avoid construction activities. The loss of foraging habitat occasionally used by small numbers of these species would not have any effect on their breeding success. For these reasons, impacts on these species from the Specific Plan were considered less than significant under CEQA.

[3] Specific Plan Policy 6-8: "Minimized construction related impact on rare, threatened, endangered or other special-status species particularly in natural, created or enhanced habitat areas remaining or preserved on site such as burrowing owls, salt marsh harvest mice, salt marsh wandering shrews, pallid and Yuma bats, and nesting northern harriers, peregrine falcons, Alameda song sparrows, Bryant's savannah sparrows, San Francisco common yellow throats, and tricolored blackbird colonies. Measures may include conducting pre-construction /pre-disturbance surveys, establishing buffer zones, avoiding habitat, creating alternate habitat, salvaging individuals, and during the breeding season: avoiding construction activities, excluding individuals from construction areas, removal of vegetation."

The proposed Project would similarly impact foraging habitat for the American white pelican, golden eagle, black tern, California least tern, Vaux's swift, bank swallow, yellow warbler, grasshopper sparrow, and Townsend's big-eared bat due to disturbance from construction activities and loss of habitat from the development of natural areas. However, due to the smaller Project footprint and avoidance of direct impacts on wetlands, these impacts would be less extensive compared to the impacts described in the RFEIR. Therefore, there is no new or substantially more severe significant impact of the Project on these species, and Project impacts on these species would remain less than significant under CEQA.

Impacts on Special-Status Plant Species (Less than Significant)

Impacts on special-status plant species from proposed development under the Specific Plan were considered less than significant in the RFEIR. Protocol-level surveys for special-status plant species were completed in the study area. None were found, although there is a potential for these species to be present in some of the wettest, inaccessible parts of the marshes and wetlands outside the Specific Plan Project footprint within the study area for Area 4.

Site conditions have not changed since the protocol-level plant surveys were conducted in 2007. Due to the highly disturbed and upland nature of the habitat within the Project footprint, special-status plants are determined to be absent. Areas where special-status plants species could have some potential to occur, including the aquatic, salt marsh, and wetter seasonal wetland habitats, would not be directly impacted as a result of the Project, but could potentially be impacted indirectly as described above in Impacts of Alteration of Site Hydrology on Avoided Wetlands and Associated Species and Impacts of Freshwater Inputs on Salt Marsh Habitat and Associated Species. The potential for impacts to those special-status plants is described under those two headings. There is no new or substantially more severe significant impact of the Project on these species, and implementation of Mitigation Measures BIO-2.1–2.5, as well as Mitigation Measure BIO-11.1 addressing indirect impacts from the spread of nonnative, invasive plant species, would continue to reduce this impact to less than significant levels.

Impacts on Burrowing Owls (Less than Significant)

As described under *Special-Status Animals* above, surveys determined that four pairs of burrowing owls were nesting within Area 4 in 2006. The RFEIR concluded that impacts on burrowing owls from proposed development under the Specific Plan were less than significant with implementation of the RFEIR burrowing owl mitigation measures (MM BIO-4.1 through MM MIO-4.6). Today, the number of burrowing owls that currently nest on the site is likely much lower (and may be zero) due to regional declines in burrowing owl populations and the lack of recent on-site observations. It is unknown how many owls currently nest on the site, if any. If owls continue to use burrows on or immediately adjacent to the Project site, Project construction could result in the mortality or injury of individual owls in burrows, or cause the abandonment of active nests. Owls that continue to nest within Area 4 following development under the Specific Plan could also be subject

to disturbance by domestic animals and people. Due to the small size of the burrowing owl population and limited occupied nesting habitat in the region, the impacts would be a significant impact under CEQA.

The study area provides ostensibly suitable foraging habitat for burrowing owls within upland agricultural, agricultural field/seasonal wetland (when the wetlands are dry), and ruderal herbaceous field habitats. However, the majority of these areas are regularly disturbed by farming activities (i.e., disking), and do not support any vegetation or associated invertebrate/small mammal prey for burrowing owls. Due to the low quality of the foraging resources within the study area, proposed Project impacts on foraging habitat for burrowing owls is considered less than significant under CEQA.

The proposed Project would not cause any new or substantially more severe significant impacts to burrowing owls compared to those analyzed in the RFEIR. Project impacts on burrowing owls are expected to be similar in kind, albeit far less extensive (due to the smaller impact area, and the lower numbers of burrowing owls in the region and in Area 4) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement the RFEIR burrowing owl mitigation measures (MM BIO-4.1 through MM MIO-4.6), is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

Impacts on the California Tiger Salamander (Less than Significant)

Impacts of development under the Specific Plan on the California tiger salamander were considered less than significant in the RFEIR. There is no new indication that California tiger salamanders occur within or immediately adjacent to the study area since the preparation of the 2009 Biological Resources Report and certification of the 2015 RFEIR. Although there continues to be some possibility that small numbers of California tiger salamanders could disperse to the study area from nearby populations, as discussed in the RFEIR this likelihood is very low, and given that the Project footprint is located even farther from known occurrences than what was analyzed in the RFEIR, there is no expectation that California tiger salamanders would occur within the Project's impact areas (H. T. Harvey & Associates 2007a). Thus, there is no new or substantially more severe significant impact of the Project on this species, and Project impacts on California tiger salamanders would be less than significant under CEQA.

Impacts on Nesting Peregrine Falcons (Less than Significant)

Impacts of development under the Specific Plan on foraging habitat for peregrine falcons was considered less than significant under CEQA due to the abundance of suitable foraging habitat for this species in the surrounding region. The proposed Project will impact a less extensive area of peregrine falcon foraging habitat compared to the area analyzed under the Specific Plan, and thus this impact is considered less than significant.

Peregrine falcons are not known to nest within the study area currently. However, there is some potential for peregrine falcons to nest on electrical towers within the study area, and the Project includes the modification/replacement of PG&E towers to accommodate new roadways. The modification or replacement of these towers has some potential to result in direct impacts on nesting peregrine falcons if an active nest is present at the time that Project work occurs. In addition, Project activities occurring in close proximity to an active peregrine falcon nest can potentially disturb the nesting birds, causing them to abandon an active nest with eggs or young. The loss of a nest location would not result in a significant impact on this species due to the abundance of suitable nest sites on other towers in the South Bay. However, the loss of eggs or young would represent a substantial impact on this species' regional population due to its existing low numbers in the South Bay, and this impact would be considered significant under CEQA.

The proposed Project would not cause any new or substantially more severe significant impacts to peregrine falcons compared to those analyzed in the RFEIR. The RFEIR prescribed mitigation measures (MM BIO-5.1 through 5.3) to reduce potential impacts to a less than significant level. The proposed Project, which would implement these same RFEIR, is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project on peregrine falcons would remain less than significant.

Impacts on Tricolored Blackbird Colonies (Less than Significant)

Suitable habitat for nesting tricolored blackbirds is present within the dense cattails and tules along the eastern edge of the diked salt marsh habitat in the study area. Although there is no evidence that tricolored blackbirds have ever nested on or close to the study area, there is some potential for a nesting colony of tricolored blackbirds to be present in this area when Project activities occur. Construction activities located near a nesting colony of tricolored blackbirds could potentially result in the abandonment of the colony, which would be considered a significant impact under CEQA due to low populations and sensitivity of this species.

The proposed Project would not cause any new or substantially more severe significant impacts to tricolored blackbirds compared to those analyzed in the RFEIR. Project impacts on tricolored blackbirds are expected to be similar in kind, albeit far less extensive (due to the smaller impact area, and the lower numbers of burrowing owls in the region and in Area 4) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement the RFEIR tricolored blackbird mitigation measures (MM BIO-6.1 through MM BIO-6.3), is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would be less than significant.

Impacts on Roosting Bats (Less than Significant)

No suitable roosting sites for pallid bats or Yuma myotis are present within the portion of Area 4 to be developed, and the Project will have no impact on potential roosting habitat for these species. Individual pallid

bats or Yuma myotis that roost elsewhere in the region may occasionally forage over the Project development area; however, Project impacts on bat foraging habitat are not considered significant, as ample foraging habitat for bats will be present on and in the vicinity of the study area following Project construction.

Mitigation Measures BIO-7.1 through BIO-7.6 from the RFEIR are no longer warranted, as the Project would not impact roosting habitat for bats.

Impacts on the Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew (Less than Significant)

The 2009 Biological Resources Report and 2015 RFEIR reported that salt marsh harvest mice are known to occur in the diked salt marsh habitat in Area 4, and the tidal salt marsh habitat along Mowry Slough (outside of Area 4, adjacent to the study area) also provides suitable habitat for this species. Salt marsh harvest mice may also occur in the agricultural field/seasonal wetland – saline to brackish habitat in the study area, especially where pickleweed is present (Figures 3 and 6). Salt marsh wandering shrews are not known to occur within the study area; however, because this species' typical habitat is similar to that of the salt marsh harvest mouse, the shrew is presumed to occur within the same areas. The Project would avoid direct impacts on the majority of suitable habitat for these species; however, where the development area intersects a drainage ditch that supports a narrow strip of pickleweed, a free-span bridge will be installed over this habitat, which would result in shading on a small area (approximately 66 linear feet) of this habitat (Figure 6).

Indirect impacts on habitat for salt marsh harvest mice and salt marsh wandering shrews would occur as a result of the functional loss of habitat due to interruption of wetland connectivity, water quality degradation, disturbance associated with adjacent development, and increased predation by domestic species. The Project would also effectively isolate 1.73 acres of this habitat, located under and east of the proposed free-span bridge, following construction (Figure 6). Due to the sensitivity of these species and their small populations, Project impacts on habitat from shading, functional habitat loss, and habitat isolation would be considered significant under CEQA.

Residential development within the study area could also result in indirect impacts on the salt marsh harvest mouse and salt marsh wandering shrew through increased human use of levees adjacent to suitable habitat for these species (as discussed in *Impacts on Sensitive Habitats and Species from Recreational Disturbance* below). Domestic pets, cats in particular, may stray from the residential areas within the Project footprint and depredate salt marsh harvest mice or salt marsh wandering shrews within the study area. Populations of nonnative mammals such as house mice (*Mus musculus*), black rats (*Rattus rattus*), and Norway rats (*Rattus norvegicus*), as well as urban-adaptive natives such as the raccoon (*Procyon lotor*) are likely to increase in the Project vicinity following development. These species may compete with or prey upon salt marsh harvest mice and salt marsh wandering shrews.

The RFEIR concluded that implementation of the land use plan approved by the Specific Plan would result in the loss of up to 7.65 acres of salt marsh harvest mouse/salt marsh wandering shrew habitat due to fill, grading,

vegetation removal, and/or shading, and that impacts to these species would also occur as a result of the functional loss of habitat due to interruption of wetland connectivity, water quality degradation, disturbance associated with adjacent development, and increased predation by domestic species. The RFEIR prescribed mitigation measures (MM BIO-8.1 through MM BIO-8.4), implementation of which would reduce impacts to a less than significant level.

The proposed Project would not cause any new or substantially more severe significant impacts to either of these species compared to those analyzed in the RFEIR. Project impacts on these species are expected to be similar in kind, albeit far less extensive (due to the smaller impact area, fewer number of new single family houses, etc.) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement mitigation measures MM BIO-8.1 through MM BIO-8.4, is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

Impacts on Sensitive Habitats and Species from Recreational Disturbance (Less than Significant)

The proposed Project would result in an increase in recreational use of levees along the Alameda County Flood Control & Water Conservation District channels and Mowry Slough. The RFEIR analyzed the impacts of such increased recreational use, based on the development approved in the Specific Plan. The RFEIR prescribed mitigation measures (MM BIO-9.1 and 9.2) to reduce such impacts to a less than significant level.

The proposed Project would not cause any new or substantially more severe significant impacts on sensitive habitats and species from recreational disturbance. Project impacts on sensitive habitats and species from recreational disturbance are expected to be similar in kind, albeit far less extensive (due to the smaller impact area, and fewer number of new residents) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement RFEIR mitigation measure MM BIO-9.2 (MM BIO-9.1 applied just to the originally proposed golf course and is no longer relevant), is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

Indirect Impacts on Waterbird Use of Wetlands (Less than Significant)

Development in Area 4 may have indirect impacts on wetlands, marshes, and aquatic habitats immediately adjacent to the study area. The magnitude of these impacts depends on the existing use of these wetlands by wildlife, as well as the decline in numbers of wildlife that use the wetlands following Project construction (the latter being a function of proximity to development).

As discussed in the RFEIR, the loss of seasonal wetlands in the study area is not considered a significant impact on waterbirds because large numbers of waterbirds have not been observed using these wetlands. However, the perennial wetlands within the former Pintail Duck Club consistently support high numbers of waterbirds. The RFEIR determined that full buildout of development approved by the Specific Plan was not expected to result in the complete abandonment of the former Pintail Duck Club wetlands by waterbirds; however, noise, movement of people, domestic animals, and vehicles within the developed area as well as encroachment of people and domestic animals into the natural areas was expected to reduce the habitat value of this area to some extent. Due to the importance of these wetlands to waterbirds, such impacts were considered significant under CEQA. The RFEIR prescribed Mitigation Measure MM BIO-10.1 to reduce such impacts to a less than significant level.

The proposed Project would not have any new or substantially more severe significant impacts on waterbird use of wetlands. Project impacts on waterbird use of wetlands are expected to be similar in kind, albeit far less extensive (due to the smaller impact area, and fewer number of new residents) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement RFEIR mitigation measure MM BIO-10.1, is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

Indirect Impacts from the Spread of Nonnative, Invasive Plant Species (Less than Significant)

As discussed in the RFEIR, there are small populations of non-native invasive plant species throughout the Specific Plan Project site. Ground disturbance associated with the Specific Plan Project would create new areas suitable for recruitment of these non-native species. Expansion of these invasive plant populations would also increase the seed bank of the site allowing spread to unimpacted natural habitats within the study area. Invasion by these non-native species would degrade the functions and values of preserved natural habitat for native plant and wildlife species, resulting in a significant impact. The RFEIR prescribed Mitigation Measure BIO-11.1, the implementation of which would reduce impacts to a less than significant level.

The proposed Project would not cause any new or substantially more severe significant impacts from the spread of nonnative, invasive plant species. Project impacts from the spread of nonnative, invasive plant species are expected to be similar in kind, albeit far less extensive (due to the smaller impact area, and fewer number of new residents) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement RFEIR mitigation measure MM BIO-11, is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

Indirect Impacts on Wildlife Movement (Less than Significant)

As discussed in the RFEIR, impacts of the proposed development under the Specific Plan on wildlife movement were considered less than significant under CEQA. No new changes to Project impacts on wildlife movement have been identified since the 2009 Biological Resources Report was prepared or the 2015 RFEIR was certified.

The proposed Project would develop a substantially smaller area than was analyzed in the RFEIR. Therefore, Project impacts on wildlife movement would remain less than significant.

Short-Term Impacts on Wildlife during Construction (Less than Significant)

As discussed in the RFEIR, short-term impacts of construction-related activities including noise, ground vibrations, and movement of heavy equipment were expected to result in some impacts on wildlife use of the Specific Plan study area. Mobilization of dust can also affect wildlife habitats, and night-lighting associated with any nighttime construction can deter wildlife use of certain areas or subject some wildlife to greater nighttime predation risk. However, wildlife species that use the study area are already exposed to intermittent loud noises from trains, farming equipment, and other sources, and they have habituated to these disturbances. Further, wildlife species were expected to resume use of undeveloped portions of the study area following Project construction. Thus, the RFEIR found such potential impacts to be less than significant under CEQA.

The proposed Project would develop a substantially smaller area than was analyzed in the RFEIR. Therefore, Project impacts on wildlife movement would remain less than significant.

Short-Term Impacts on Water Quality during Construction (Less than Significant)

As discussed in the RFEIR, impacts on water quality during construction could occur due to soil disturbance and erosion, stockpiling of materials, generation of construction bi-products, and contamination as a result of construction equipment fuel leaks. Degradation of water quality on and downstream of the development footprint would adversely affect foraging conditions and health of a variety of wildlife species, including harbor seals and fish (including Green Sturgeon, Longfin Smelt, and Steelhead) within Mowry Slough; aquatic invertebrates that support foraging and breeding waterbirds in the sloughs, channels or wetland habitats; and terrestrial wildlife species including rare salt marsh associated species as well as common species that use wetland habitat for drinking water, foraging, and refugia. Impacts to wildlife affected by degradation of water quality related to construction would be a significant impact (in addition, see Long-term Water Quality Impacts below). The RFEIR prescribed mitigation measures MM BIO-12.1 through MM BIO-12.4, implementation of which would reduce impacts to a less than significant level.

The proposed Project would not have any new or substantially more severe significant impacts on water quality from Project construction. Project impacts on water quality from Project construction are expected to be similar in kind, albeit far less extensive (due to the smaller impact area, and fewer number of new residents) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement RFEIR mitigation measures MM BIO-12.1 through MM BIO-12.3 (MM BIO-12.4 is not applicable to the Project), is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

Long-Term Water Quality Impacts (Less than Significant)

As discussed in the RFEIR, the proposed Specific Plan development may result in the degradation of water quality due to stormwater runoff from development into existing/protected wetlands and the San Francisco Bay. Water quality could be affected by an increase in the volume of stormwater runoff which increases erosion potential, the use of fertilizers and pesticides associated with landscaping within the development, and vehicular traffic debris/chemicals generated on parking lots and roadways. Unlike the construction-related impacts to water quality discussed above, these impacts have the potential to be long-term and on-going. The degradation of water quality could adversely affect the quality of habitat for, and possibly the health of, both common and special-status species that will continue to use natural areas on and adjacent to the proposed development. In addition, siltation within these habitats may change the existing vegetation community present and/or eliminate any previously undisturbed habitat that could provide suitable habitat for special-status plant species in the future. The Project is unlikely to contribute substantially to long-term degradation of water quality in Mowry Slough and ACFCWCD Line D since contributions from the proposed development would be minimal relative to contributions from the rest of these channels' large watersheds. However, due to the number of sensitive wildlife species using Mowry Slough and its marshes downstream from the site, any adverse effect on water quality could be substantial. Degradation of water quality in the long-term due to Project development would be a significant impact. The RFEIR prescribed mitigation measure MM BIO-13.1, implementation of which would reduce impacts to a less than significant level.

The proposed Project would not have any new or substantially more severe significant long-term water quality impacts. Project-related long-term water quality impacts are expected to be similar in kind, albeit far less extensive (due to the smaller impact area, and fewer number of new residents) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which must implement RFEIR mitigation measures MM BIO-13.1, is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

Impacts on Trees (Less than Significant with Mitigation)

As analyzed in the RFEIR for the Specific Plan, implementation of the development approved by the Specific Plan would result in the loss of some ordinance-sized trees, and Project developers would be required to apply to the City of Newark for tree removal permits. Any such proposal to remove trees for a development Project would be evaluated, taking into consideration the number, age, size, condition, and species of the trees. The loss of a large number of these trees would be a significant impact. Possibilities for tree preservation and suitability of transplanting appropriate trees will be considered at the time of development and shall be based upon tree sizes, health, structure, locations, and species. Although many trees may be suitable for transplantation, due to the large numbers of native and non-native trees that have the potential to be removed as part of implementing the proposed Project, the loss of trees would be a significant impact under CEQA. Also, Project implementation could result in construction in the vicinity of existing trees to be preserved. Construction activities could damage these trees and the potential for preserved trees to continue to grow and thrive could be affected by the development. This could adversely affect the long-term survival of trees to remain by restricting sunlight and root growth, and/or altering groundwater conditions. The RFEIR prescribed mitigation measures MM BIO-14.1 through MM BIO-14.4, and MM BIO-15.1 – 15.3, the implementation of which would reduce impacts to a less than significant level.

The proposed Project has the potential to result in the loss of some ordinance-size trees. The proposed Project would not result in any new or substantially more severe significant impacts to trees. Project-related impacts to trees are expected to be similar in kind, albeit far less extensive (due to the smaller impact area) than, those anticipated in the Specific Plan and RFEIR. The proposed Project, which would implement RFEIR mitigation measures MM BIO-14.1 through 14.4 and MM BIO-15.1 – 15.3, is substantially smaller than the development approved in the Specific Plan and analyzed in the RFEIR (e.g., smaller development footprint, smaller number of single family residences). As a result, impacts of the Project would remain less than significant.

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Appendix A. Site Photographs

Photo 1. Sub-Area C in December 2018.

Photo 2. Salt marsh harvest mouse and shorebird habitat within the Pintail Duck Club avoided by the Project.

Photo 3. Sub-Area B, December 2018.

Photo 4. Sub-Area C in December 2018, showing a mosaic of wetlands and uplands within the farmed fields.

Photo 5. Sub-Area B in main development area, November 2018. Within mapped wetlands, soils were moist, however within the proposed development area, soils were dried and mowed vegetation was upland, planted hay species.

Photo 6. Sub-Area C, November 2018, at an upland/wetland boundary. Development was confirmed to be located on the upland areas in the foreground of the picture.

Appendix B. Relevant RFEIR Biological Resource Mitigation Measures

Avoided Wetlands and Associated Species

MM BIO-2.1: Stormwater runoff for the proposed residential development within Area 4, shall continue to drain, post-project, from multiple discharge points, and the velocity of discharge into the wetlands shall be designed to prevent erosion and channelization. This includes avoiding single-point source of water discharges from the proposed development. Rather, simulation of natural flow through a more dispersed discharge of collected runoff shall be designed for movement of water from hardscape within developed features into wetlands surrounded by or adjacent to development such that the existing hydrologic condition is not substantially changed.

For every seasonal wetland to be preserved that fronts the development envelope that is smaller than acre, as shown on the habitat map (Figure 3), there will be at least one discharge point of stormwater flows and nuisance flows. For wetlands greater than one acre there shall be a minimum of three discharge points separated by no less than 200 feet and situated along the upslope perimeter of the wetlands.

For each of the seasonal wetlands to be preserved, stormwater runoff and nuisance flows shall be designed to incorporate grassy swales, retention basins, and energy dissipaters to control discharge velocities in order to prevent erosion at the discharge point within wetlands and to prevent channelization. Channel erosion at each of the outfall discharge points draining into seasonal wetlands shall be monitored annually for the first five years. If any channel erosion is noted, remedial measures shall be taken to incorporate additional suitable water control structures to prevent further erosion. Once these remedial measures are implemented, the five year monitoring phase will be restarted at that location.

MM BIO-2.2: All grading and culvert sizing and installation shall be designed to ensure adequate drainage without draining wetlands more quickly than currently occurs and to allow water to pond for durations similar to the current existing condition.

MM BIO-2.3: To prevent any significant decrease in the amount of water entering preserved wetland habitats during the winter months, native grass species shall be used in the landscaping and bio-retention swales around the perimeter of the development footprint. A species list for use in the landscaping shall be developed by a qualified biologist and approved by the City of Newark.

MM BIO-2.4: The following measures shall be implemented to minimize any perennial ponding within the existing seasonal wetlands.

- Nuisance runoff from the proposed residential use shall be minimized and controlled to reduce their input into the remaining natural habitat during the dry season.
- Water use shall be limited to the minimum necessary for landscaping, including that under private ownership, to decrease summer nuisance flow to negligible amounts and approximate the existing condition.
- Drought tolerant plant species shall be planted within landscaped areas, including private lawns, which do not require water during the summer months. Where this is not feasible, proper irrigation using only the amount of water that can be taken up by the plants shall be implemented.
- Water shall be applied at dawn to limit evaporation, thereby limiting the amount of water that must be applied and reducing the possibility of over flow from the site as evapotranspiration takes place during the day.
- Implement the following University of California Integrated Pest Management Plan recommendations to maximize irrigation efficiency:
    - Irrigate deeply, but infrequently.
    - Irrigate early in the morning. At this time water loss from evaporation is minimal, distribution is usually good because of good water pressure and limited wind, and the risk of disease development is reduced.
    - Avoid runoff by matching water application rates to soil infiltration rates (rate water enters soil) or by pulsing (i.e., applying a portion of the water, waiting for it to be absorbed in the soil, and then applying the next portion).
    - Use less water in shaded areas than in open sun.
    - Remove thatch in spring if it is more than 0.5 inch thick.
    - Do not over fertilize; fertilize moderately according to the individual species and location.

MM BIO-2.5: Any remaining dry-season nuisance flows shall be retained within the development footprint by grading the site to drain internally, or by constructing berms or swales to confine these flows to infiltrate or evaporate rather than flowing overland to seasonal wetland or salt marsh habitat.

Salt Marsh Habitat and Associated Species

MM BIO-3.1: Implementation of Mitigation Measures MM BIO-2.1 through 2.5 described above will reduce the project's impacts in Area 4 associated with the discharge of freshwater runoff into salt marsh habitats to a less than significant level.

Special-Status Plant Species

Implementation of Mitigation Measures BIO-2.1–2.5, provided above, as well as Mitigation Measures BIO-11.1 addressing indirect impacts from the spread of nonnative, invasive plant species, would reduce this impact to less than significant levels.

Burrowing Owls

MM BIO-4.1: Pre-activity surveys for burrowing owls shall be completed in the project's work area consistent with the CDFW's latest guidelines (California Department of Fish and Game 2012). Because owls are known to have occupied the study area previously, these surveys shall consist of two site visits, with the first conducted no more than 15 days prior to the start of construction activities and the second conducted no more than 48 hours prior to the start of construction activities, to minimize the probability of immigration of owls between the time surveys are completed and the initiation of grading. If the initial disturbance is followed by periods of inactivity exceeding 15 days, or if the development is phased spatially and/or temporally such that an area in which construction activities are to commence has not been disturbed within the prior 15-day period, a new burrowing owl pre-activity survey will be completed prior to the start of disturbance. If burrowing owls are detected on or within 250 feet of the project work area, Mitigation Measures MM-BIO4.2 and MM-BIO4.3 below shall be implemented.

MM BIO-4.2: If one or more burrowing owls is detected on or adjacent to the site during pre-activity surveys conducted during the nonbreeding season (defined as September 1 through January 31), a 150-foot buffer zone shall be maintained around the occupied burrow(s) if practicable. If such a buffer is not practicable, then a buffer adequate to avoid injury or mortality of owls will be maintained, or the birds will be evicted as described under Mitigation Measure MM BIO-4.3 below. During the breeding season (February 1 to August 31), any burrowing owls detected during the pre-activity surveys will be assumed to be nesting unless direct observations by a qualified biologist indicate that the occupied burrow does not contain an active nest, and a 250-foot buffer within which no new project-related activities will be permissible shall be maintained between project activities and occupied burrows. This protected buffer area will remain in effect until August 31, or until the young owls are foraging independently or the nest is no longer active based on monitoring evidence.

MM BIO-4.3: If project construction will directly impact occupied burrowing owl burrows, eviction of owls may occur outside the nesting season (i.e., between September 1 and January 31) to prevent injury or mortality of individual owls. No burrowing owls shall be evicted from burrows during the nesting season (i.e., February 1 to August 31) unless evidence indicates that nesting is not actively occurring (e.g., because the owls have not yet begun nesting early in the season, or because young have already fledged late in the season). Relocation of owls during the nonbreeding season will be completed by a qualified biologist using one-way doors, which

should be installed in all burrows within the impact area and left in-place for at least two nights. These one-way doors will then be removed and the burrows back-filled immediately prior to the initiation of grading.

MM BIO-4.4: To reduce impacts of the project on the local (South Bay) burrowing owl population, habitat shall be preserved and managed for burrowing owls on and/or off-site when development will impact a burrowing owl nest (i.e., a burrow that has been occupied by a summering pair or single owl). A total of 6.5 acres of nesting and foraging habitat will be preserved and managed per occupied burrowing owl nest (whether it is occupied by a pair or singly). Based upon the existing quality of burrowing owl habitat within the study area and the proposed project impacts, the project shall provide 6.5 acres of mitigation habitat per occupied nest located on the project site or within a surrounding buffer of 250 feet, based on the results of 2019 breeding-season surveys (described below).

A qualified biologist shall conduct breeding-season surveys for burrowing owls within the study area and all areas within 250 feet in 2019, prior to the start of construction activities. Per current CDFW guidance, the qualified biologist will conduct a minimum of four surveys (California Department of Fish and Game 2012):

- one site visit between February 15 and April 15; and
- a minimum of three site visits conducted between April 15 and July 15, at least three weeks apart, with at least one site visit after June 15.

The biologist will conduct surveys within all portions of the project site and surrounding 250-foot buffer that provide suitable nesting and roosting habitat for burrowing owls by walking straight-line transects spaced 23–66 feet apart, adjusting for vegetation height and density. Surveys will be conducted in good weather (defined as temperatures above 68°F, winds less than 7.5 miles per hour, and cloud cover less than 75%). If needed, additional surveys will be conducted to determine the number of breeding owls for mitigation purposes.

A combination of on-site and off-site mitigation for project impacts on nesting burrowing owls is acceptable. However, on-site mitigation shall contribute toward the habitat mitigation requirement only if at least 6.5 acres of contiguous burrowing owl habitat is preserved and managed on-site. Either Mitigation Measure MM BIO-4.5A or MM BIO-4.5B, described below, shall be implemented.

MM BIO-4.5A: If on-site (i.e., within the study area) habitat is to be preserved, a mitigation and monitoring plan detailing the areas to be preserved for owls, the methods for managing on-site habitat for owls and their prey, methods for enhancing burrow availability within the mitigation site (potentially including the provision of artificial burrows, although long-term management for

ground squirrels will be important as well), measures to minimize adverse effects of development on owls on-site, and a monitoring program and adaptive management program shall be prepared by a qualified biologist and submitted to the City of Newark and the CDFW for review and approval. At least 50% of the mitigation area must consist of upland habitat suitable for use by burrowing mammals, and no seasonal wetlands supporting tall vegetation or perennial wetlands shall be included within the mitigation site. The mitigation area must be contiguous with habitat that is permanently preserved as open space to avoid having the mitigation area surrounded by development in the future. The mitigation area will be protected in perpetuity through a conservation easement, deed restriction, conveyance to a qualified land trust or the Don Edwards National Wildlife Refuge, or through equivalent means.

MM BIO-4.5B: If the project proponent elects to mitigate off-site, such mitigation may take the form of habitat preservation and management (in which case all the monitoring and habitat requirements in the preceding paragraphs would apply) or the purchase of credits in an off-site mitigation bank. Because the nearest burrowing owl mitigation banks are located outside of the South Bay, this mitigation may occur outside the region.

MM BIO-4.6: As described in greater detail under Mitigation Measure MM BIO-9.2 below, signage shall be placed in appropriate locations within the study area to prohibit the public from entering areas where the artificial burrow complexes will be located. Signage will be placed along the Alameda County Flood Control & Water Conservation District Line D levees and the Mowry Slough levee to prohibit public access and protect sensitive species such as the burrowing owl.

MM BIO-4.7: Indirect effects of development could include an increase in nonnative and urban-adapted native species, and an increase in domestic animals such as cats and dogs, that could prey on more sensitive native species in the on-site conservation areas. To reduce this effect, a predator management program will be developed and implemented. This program will focus on education of occupants of the new residential areas regarding measures to minimize the potential for subsidizing predator species and to minimize the potential effects of pets on sensitive species and enforcement of the program's measures, and restrictions on certain activities that could increase predation of sensitive species. The program will include, at a minimum, the following:

- Feeding pets outdoors will be prohibited so that pet food does not attract or subsidize the diets of nuisance species.
- Pets will be prohibited from ranging freely (off-leash dogs will be prohibited in conservation areas and no free-roaming outdoor cats will be permitted), to prevent their entry into sensitive species habitat.

- All food waste will be contained so that it does not attract or subsidize the diets of predators.

Any neighborhood association established for new residential areas will be responsible for disseminating this information, and the neighborhood association and City will be responsible for enforcing the program.

Nesting Peregrine Falcons

MM BIO-5.1: Project construction, including any tower modifications and/or replacement, shall occur during the nonbreeding season (i.e., September 1 to January 31) to the maximum extent possible.

MM BIO-5.2: If project construction must commence between February 1 and August 31, then pre-activity surveys for nesting peregrine falcons shall be completed by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of demolition/construction activities during the early part of the nesting season (defined as February through April) and no more than 30 days prior to the initiation of these activities during the late part of the nesting season (defined as May through August). During this survey, the ornithologist will inspect all powerline towers within 300 feet of the project impact areas for nests of peregrine falcons. If no peregrine falcon nests are detected during the survey, MM BIO-5.3 below is not necessary. The survey results shall be provided to the Community Development Director for review and approval prior to the start of grading and construction.

MM BIO-5.3: If an active nest of peregrine falcons is found within 300 feet of any construction activity, a 300-foot buffer within which no new project-related activities will be permissible, will be maintained between project activities and the active nest. This protected area will remain in effect until the young falcons have fledged or the nest is no longer active.

Tricolored Blackbird Colonies

MM BIO-6.1: Construction shall not commence during the breeding season (i.e., between April 1 and July 31), to the maximum extent possible. If construction activities are not initiated during the tricolored blackbird breeding season, Mitigation Measures MM BIO 6.2–6.3 are not needed.

MM BIO-6.2: If construction activities must commence between April 1 and July 31, pre-activity surveys for nesting tricolored blackbirds will be completed by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of project activities. During this survey, the ornithologist will inspect all potential nesting habitat within 400 feet of impact areas for active nests. If no tricolored blackbird colonies are detected during the survey, MM BIO-6.3 is not necessary.

MM BIO-6.3: If an active tricolored blackbird nesting colony is detected within 400 feet of project activities, a 400-foot buffer within which no new project-related activities will be permissible, will be maintained between project activities and any occupied nests. This protected area shall remain in effect until the young have fledged or the colony is no longer active.

Salt Marsh Harvest Mouse and Salt Marsh Wandering Shrew

MM BIO-8.1: Prior to the issuance of building permits, all temporary staging areas and construction access roads shall be located away from suitable habitat for these species and the limits of all wetlands that are to be avoided will be clearly demarcated with Environmentally Sensitive Area fencing under the direction of a qualified biologist to avoid inadvertent disturbance of any habitat outside of the designated construction areas during construction activities.

MM BIO-8.2: A barrier to exclude salt marsh harvest mice and salt marsh wandering shrews from the project impact areas will be installed at the perimeter of all project areas that are located within 50 feet of potential salt marsh harvest mouse and salt marsh wandering shrew habitat. This barrier, which will be constructed under the guidance of a qualified biologist, shall consist of a 3-foot tall, tight cloth or smooth plastic silt fence toed into the soil at least 3 inches deep and supported with stakes.

MM BIO-8.4: Habitat for the salt marsh harvest mouse and salt marsh wandering shrew that is (1) indirectly impacted due to proximity to project development (i.e., habitat that is located within 100 feet of impact areas) and/or (2) effectively isolated from other habitat areas due to project construction, will be mitigated at a 2:1 ratio by on-site habitat restoration. This ratio is relatively low because the habitat located within 100 feet of the project site will continue to provide some value to salt marsh harvest mice and salt marsh wandering shrews following project construction. Further, the existing connectivity between the large area of habitat at the former Pintail Duck Club and the small areas of habitat that will be isolated by project development is tenuous, and thus of relatively low quality to support these species. Habitat will be restored via the cessation of regular disking activities that currently prevents suitable pickleweed and other suitable wetland vegetation from establishing in the agricultural field/seasonal wetland – saline to brackish habitat in the study area. The exact location of the restored habitat may be flexible, but it will be immediately adjacent to the diked salt marsh habitat in the study area and will not be flooded as part of on-site wetland mitigation (see *Impacts on Waterbird Use of Wetlands* below).

A habitat mitigation and monitoring plan will be prepared that outlines the necessary steps for restoration; it will include a plan view graphic showing the target restoration activities as well as a monitoring and reporting plan with success criteria. The plan will include a recommended timeline for restoration activities and the establishment of suitable habitat. The mitigation and monitoring plan will be approved by the City of Newark, the USFWS, and the CDFW prior

to issuance of grading and building permits. The restoration work will begin in the same construction season as the initiation of grading within suitable salt marsh harvest mouse/salt marsh wandering shrew habitat, and restoration site grading will be completed within one year of initiation (or as otherwise determined by resource agency permits). All created mitigation habitats will be protected in perpetuity and will be placed into a land trust or under a conservation easement, or fee title will be transferred to the Don Edwards National Wildlife Refuge or a third party non-profit entity that has been approved by the City and appropriate permitting agencies.

Sensitive Habitats and Species from Recreational Disturbance

MM BIO-9.2: Signs will be erected along the Alameda County Flood Control & Water Conservation District levees and along Mowry Slough describing the ecological value of adjacent wetland areas and instructing users to stay on the levee tops, stay out of sensitive habitats, and keep dogs on leashes.

Waterbird Use of Wetlands

MM BIO-10.1: Indirect impacts of residential development on birds using the wetlands in Area 4 shall be mitigated by the creation or enhancement of waterbird habitat at a 0.5:1 ratio for a total of 9 acres of mitigation. Mitigation wetlands for these impacts may be created on-site or off-site, but shall be located a minimum of 300 feet from any development, to the maximum extent possible. The mitigation area shall provide perennial or near-perennial water with a variety of depths ranging from very shallow water or exposed mud to water up to several feet deep in order to support the bird species currently using the former Pintail Duck Club. If the mitigation occurs on-site, a hydrologist will be consulted to ensure that the creation of the new wetlands will not adversely affect areas of pickleweed habitat around the former Pintail Duck Club (e.g., due to flooding or raised groundwater). For example, changing the water surface elevation at which the pump operates, so that portions of the agricultural fields on Area 4 are flooded and provide suitable waterbird habitat, could potentially provide this mitigation as long as existing salt marsh harvest mouse habitat around the former Pintail Duck Club is not flooded to the point that its suitability for harvest mice is adversely affected.

A mitigation plan shall be developed that outlines the proposed wetland creation/enhancement for indirect impacts on waterbird use of wetlands within Area 4. The plan will include the following components:

- 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
  - Maintenance plan
  - Remedial measures/adaptive management, etc.
- Monitoring and Reporting Requirements
- Timeline for mitigation activities
- Success Criteria, which at a minimum will include providing perennial or near-perennial water with a variety of depths ranging from very shallow water or exposed mud to water up to several feet deep

This plan will be submitted to and approved by staff of the City of Newark prior to the initiation of any fine grading or construction on the site. The mitigation work will begin in the same construction season as the initiation of grading or construction, and mitigation site creation will be completed within one year of initiation. All created/enhanced habitats shall be protected in perpetuity and will be placed into a land trust or under a conservation easement, or fee title will be transferred to the Don Edwards National Wildlife Refuge or a third-party non-profit entity that has been approved by the City and appropriate permitting agencies.

Spread of Nonnative, Invasive Plant Species

MM BIO-11.1: Prior to issuance of grading and building permits, the project sponsor shall develop and implement an Invasive Species Management Plan to reduce the presence and spread of non-native, invasive plant species within the study area. The Plan shall be developed prior to importing any fill material required to elevate building sites and prior to grading any areas within the project footprint. The overarching goal of this mitigation is to halt the further expansion of existing invasive species and introduction of new invasives into sensitive habitats. The Invasive Species Management Plan shall include, but not be limited to, the following:

1. Prior to construction, map populations of invasive species within all areas proposed to be graded, including access roads and staging areas, and within all sensitive habitats (i.e. wetlands) to be preserved within the study area; quantify the extent and location of invasive populations in sensitive habitats.
2. Areas identified to have weed infestations shall be treated prior to ground disturbance according to weed control methods detailed below and Best Management Practices within

all upland areas to be graded, after review and approval of methodologies by the City of Newark.

3. Weed control treatments shall include all legally permitted herbicide, manual, and mechanical methods approved for application. The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Advisor (PCA), where concurrence has been provided by the City of Newark, and implemented by a Licensed Qualified Applicator. Herbicides shall not be applied during or within 72 hours of a scheduled rain event. Where manual and/or mechanical methods are used, disposal of the plant debris will take place at an appropriate off-site location. The timing of the weed control treatment shall be determined for each plant species with the goal of controlling populations before they start producing seeds and/or encroach into adjacent areas from rhizomatous shoots. Consultation with a City of Newark approved wildlife biologists or plant ecologist shall be required prior to weed control treatments in sensitive habitats with the intent of avoiding any adverse impacts to special-status species in the area.
4. Surveying and monitoring for weed infestations shall occur annually while grading operations are occurring for the project. Treatment of all identified weed populations shall occur at a minimum of once annually.
5. Once grading ceases, invasive plant populations within all sensitive habitats to be preserved shall be mapped and the aerial extent and location of invasive populations documented on an annual basis for a minimum of three years following grading operations.
6. If, in any monitoring year, the size of existing populations within sensitive habitats expands by 20% or greater (interannual variation due to climate differences may account for as much as 10% annual changes) in terms of surface area from populations documented prior to construction, weed control measures shall be implemented as outlined above within sensitive habitats.
7. Further monitoring and implementation of weed control measures can be discontinued and the invasive species control considered a success if invasive species population size in sensitive areas remains relatively constant (less than 10% fluctuation in size based on an acreage basis) for three consecutive years of normal rainfall.
8. During project construction, all seeds and straw materials used on site shall be weed-free rice straw, and all gravel and fill material shall be certified weed free to the satisfaction of the City of Newark and any deviation from this will be approved by the City.
9. During project construction, vehicles and all equipment shall be washed (including wheels, undercarriages, and bumpers) before and after entering the project area. Vehicles shall be cleaned at existing construction yards or legally operating car washes. The project applicant shall document all vehicles have been washed prior to commencing work to the satisfaction of the City of Newark. In addition, tools such as chainsaws, hand clippers, pruners, etc., shall be washed before and after entering the work area. All washing shall

take place where rinse water is collected and disposed of in either a sanitary sewer or landfill, unless otherwise approved by the City of Newark. A written, daily log shall be kept for all vehicle/equipment/tool washing that states the date, time, location, type of equipment washed, methods used, and staff present. The log shall be available to the City of Newark for inspection at any time and shall be submitted to the City on a monthly basis.

Short-Term Impacts on Water Quality during Construction

MM BIO-12.1: Prior to the issuance of grading permits, the project will incorporate Best Management Practices (BMPs) for water quality to minimize impacts in the surrounding wetland environment, sloughs and channels, and the San Francisco Bay during construction. These BMPs will include numerous practices that will be outlined within the Stormwater Pollution Prevention Plan (SWPPP), but will include measures such as:

- No equipment shall be operated in live flow in any of the sloughs or channels or ditches on or adjacent to the site.
- No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into aquatic or wetland habitat.
- Standard erosion control and slope stabilization measures will be required for work performed in any area where erosion could lead to sedimentation of a waterbody. For example, silt fencing will be installed just outside the limits of grading and construction in any areas where such activities will occur upslope from, and within 50 feet of, any wetland, aquatic, or marsh habitat. This fencing shall be inspected and maintained regularly throughout the duration of construction.
- Machinery shall be refueled at least 60 feet from any aquatic habitat, and a spill prevention and response plan shall be developed and approved by the City of Newark. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

MM BIO-12.2: Soil stockpiling, equipment staging, construction access roads, and other intensively soil-disturbing activities shall not occur immediately adjacent to any wetlands that are to be avoided. The limits of the construction area shall be clearly demarcated with Environmentally Sensitive Area fencing by a qualified biologist to avoid inadvertent disturbance outside the fence during construction activities.

MM BIO-12.3: Dust suppression (e.g., using watering trucks) shall be implemented during all grading, construction, and soil stockpiling activities that have the potential to mobilize dust to keep dust from being transported to vegetated wetlands nearby. If soil stockpiles are to remain on

the site for long periods of time prior to the start of grading, they shall be hydroseeded so that vegetation will suppress dust and inhibit erosion.

Long-Term Water Quality Impacts

BIO MM-13.1: The proposed development project shall comply with the National Pollution Discharge Elimination System (NPDES) permit requirements, the Alameda County Clean Water Program standards, the City of Newark's ordinances, policies, and processes, and other applicable local, state, and federal requirements.

The proposed development project shall prepare a stormwater management plan (SWMP) that includes post-construction water quality BMPs that control pollutant levels as required under Section C.3 of the NPDES Municipal Stormwater Permit issued by the RWQCB. Neighborhood- and/or lot-level BMPs to promote "green" treatment of storm runoff shall be emphasized, consistent with Regional Board guidance for NPDES Phase 2 permit compliance. The purpose of these measures will be to ensure that water leaving the site and entering seasonal wetland and marsh habitats, including ACFC&WCD Line D and Mowry Slough, will be of the same quality (or better) than currently enters these habitats from the present project footprint. These measures include the design and construction of features to remove particulates and contaminants from runoff. Such features may include mechanical treatment; the use of grassy swales to capture contaminants from landscaping or residences as water infiltrates/percolates to the surrounding wetland habitat; the use of "planter boxes" within private development to treat individual residential runoff; the use of surface materials (where practicable) to allow for infiltration on private property (including permeable driveway material); and the retention of water on the site, when possible (in addition, see MM HYD-1.1 through 1.4 in the 2015 RFEIR).

Trees

BIO MM-14.1: Implementation of the project shall incorporate preservation of existing trees with emphasis on ordinance-size or larger native species and in good or better condition, to the maximum extent practicable, to the satisfaction of the City's Community Development Director.

BIO MM-14.2: In locations where preservation of existing trees is not feasible due to site constraints, trees to be removed by the project shall be replaced at a 3:1 ratio unless the City's Community Development Director determines that a higher ratio is required. Trees greater than 18 inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has first been approved for the removal of such trees.

BIO MM-14.3: The species and exact number of trees to be planted on the site during the construction phase shall be determined in consultation with the City Arborist and to the satisfaction of the Community Development Director.

BIO MM-14.4: In the event the developed portion of the development site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures shall be implemented at the development permit stage:

- An alternative site(s) shall be identified for additional tree planting. Alternative sites may include local parks or schools, or installation of trees on adjacent properties for screening purposes, to the satisfaction of the City's Community Development Director.
- The size of a 15-gallon replacement tree can be increased to 24-inch box and count as two replacement trees.

In addition, project implementation could result in construction in the vicinity of existing trees to be preserved. Construction activities could damage these trees and the potential for preserved trees to continue to grow and thrive could be affected by the new more intense development. This intense development could adversely affect the long-term survival of trees to remain by restricting sunlight and root growth, and/or altering groundwater conditions.

Incorporation of the following measures will reduce impacts to trees to be preserved to a less than significant level:

BIO MM-15.1: Prior to issuance of any construction-phase permit, a Tree Preservation Plan shall be prepared by a certified arborist to the satisfaction of the City's Community Development Director for all areas with trees. The construction-phase Tree Preservation Plan shall include the following tree protection measures which are based on guidelines established by the International Society for Arboriculture.

- **Establish Tree Protection Zones**: Establish an area surrounding individual trees or groups of trees to be protected during construction as defined by a circle concentric with each tree with a radius 1-1/2 times the diameter of the tree canopy drip line. This Tree Protection Zone is established to protect the tree trunk, canopy and root system from damage during construction activities and to ensure the long-term survival of the protected trees. The Tree Protection Zone shall: (1) ensure that no structures or buildings, that might restrict sunlight relative to the existing condition, will be constructed in close proximity to the trees; and (2) that no improvements are constructed on the ground around the tree within the Tree Protection Zone, thus ensuring that there is sufficient undisturbed native soil surrounding the tree to provide adequate moisture, soil nutrients and oxygen for healthy root growth.

- **Protect Tree Root System**: Protect tree root systems from damage caused by (a) runoff or spillage of noxious materials while mixing, placing, or storing construction materials and (b) ponding, eroding, or excessive wetting caused by dewatering operations through use of the following measures during excavation and grading.
    - *Excavation*: Do not trench inside tree protection zones. Hand excavate under or around tree roots to a depth of three (3) feet. Do not cut main lateral tree roots or taproots. Protect exposed roots from drying out before placing permanent backfill.
    - *Grading*: Maintain existing grades within tree protection zones. Where existing grade is two (2) inches or less below elevation of finish grade, backfill with topsoil or native site soil. Place fill soil in a single uncompacted layer and hand grade to required finish elevation.
- **Install Wood Bark Mulch**: Apply 6-inch average thickness of wood bark mulch inside tree protection zones. Keep mulch six (6) inches from tree trunks.
- **Install and Maintain Protection Zone Fencing**: Provide 48-inch tall orange plastic construction fencing fastened to steel T-posts, minimum six (6) feet in length, using heavyweight plastic ratchet ties. Install fence along edges of tree protection zones before materials or equipment are brought on site and construction operations begin. Maintain fence in place until construction operations are complete and equipment has been removed from the site.
- **Prune Tree Roots and Crowns Only as Necessary**: All pruning should be performed by a qualified arborist and should be in accordance with ANSI A300 (Part 1): Tree, Shrub, and Other Woody Plant Maintenance—Standard Practices, Pruning.
- **Irrigate Trees**: Provide temporary irrigation to all trees in protection zones using a temporary on-grade drip or bubbler irrigation system sufficient to wet the soil within tree protection zones to a depth of 30 inches per bi-weekly irrigation event.

MM BIO-15.2: A certified arborist will monitor construction when work is done around any trees to be preserved. In areas where the construction-phase tree protection measures, described above under MM BIO-14.5, are not feasible, all trees affected shall be replaced with 15-gallon replacement trees at a ratio based upon the size of the tree removed, as provided in the table below. The rationale for the replacement ratio is based upon the anticipated loss of tree canopy from tree removal. In addition, all mitigation described above under Mitigation Measures BIO-14.3 and BIO-14.4 shall be implemented.

Size of Tree Removed	Replacement Ratio
(DBH, in Inches)[1]	Number of Trees Planted:Number of Trees Removed
Removed 6-11"	2:1
Removed 12-17"	3:1

Removed 18-24"	4:1
Removed >24"	5:1

[1] dbh is defined as the diameter of the tree at breast height, or the diameter of the tree at 4.5 feet above existing grade.

MM BIO-15.3 A certified arborist will review the development areas after all construction has been completed. In areas where the improvements associated with development have encroached within 1-1/2 times the diameter of the tree canopy drip line, or the trees are otherwise injured or damaged, all trees affected shall be replaced with 15-gallon replacement trees at a ratio based on the size of the affected tree, as described above.