

3.1 BIOLOGICAL RESOURCES

This section describes the existing physical and regulatory setting related to biological resources, including vegetation, habitat, wildlife, and plant species and discusses the potential effects of the EA Alternatives on these resources.

3.1.1 Regulatory Framework

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) (Title 16, Sections 3501 *et seq.* of the U.S. Code [16 U.S.C. 3501 *et seq.*], as amended in 1990 under the Coastal Zone Act Reauthorization Amendments), administered by the National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management, provides for management of the nation's coastal resources and balances economic development with environmental conservation. The overall program objectives of CZMA remain balanced to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

California has a Federally approved Coastal Management Program, which includes the California Coastal Act and the McAteer-Petris Act. The program established the San Francisco Bay Conservation and Development Commission (BCDC) as the coastal management and regulatory agency responsible for governing coastal resources within San Francisco Bay. In accordance with its role in implementing CZMA, BCDC is responsible for conducting Federal consistency reviews for projects along the San Francisco Bay segment of the California coastal zone. The coastal management plan for the east side of San Francisco consists of the McAteer-Petris Act (California Public Resources Code Section 66600 *et seq.*), the *San Francisco Bay Plan* (Bay Plan) (BCDC, 2006), and local management programs. The coastal management plan, in conjunction with other BCDC regulations, forms BCDC's management program for complying with CZMA.

Federal lands, including the VA Transfer Parcel, are outside the coastal zone, but Federal activities on land outside the coastal zone that affect resources of the coastal zone must be conducted consistent with the Bay Plan and related policies to the maximum extent practicable.

Federal Endangered Species Act

The Endangered Species Act (ESA) was enacted in 1973 (7 U.S.C. 136, 16 U.S.C. 1531 *et seq.*). Under the ESA, the Secretary of the Interior and the Secretary of Commerce have the authority to list a species as threatened or endangered (16 U.S.C. 1533[c]). The ESA is administered by both NMFS and USFWS. NMFS is accountable for animals that spend most of their lives in marine waters, including marine fish, most marine mammals, and anadromous fish such as Pacific salmon. USFWS is accountable for all other Federally listed plants and animals.

Pursuant to the requirements of the ESA, a Federal agency authorizing, funding or carrying out a project within its jurisdiction must determine whether any Federally listed threatened or endangered species may be present in the project site and determine whether the agency's action could affect any Federally listed species (16 U.S.C. 1536(a)(2), (3)). If the action would likely affect a listed species, the agency must consult with the USFWS or NMFS under Section 7 of the ESA to determine whether the action is likely to jeopardize the continued existence

of the species or result in the destruction or adverse modification of designated critical habitat (16 U.S.C. 1536(a)(2)). Species subject to ESA are addressed below.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), as amended, makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued by USFWS. The MBTA does not provide protection for habitat of migratory birds. Permits are issued to qualified applicants for only the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal.

Federal agencies, such as VA and Navy, are required to comply with Federal laws, including the MBTA; VA and Navy must analyze potential impacts of all actions, including the alternatives, on migratory birds.

Section 404 Clean Water Act

Section 404 of the Clean Water Act (CWA) regulates temporary and permanent fill, as well as the disturbance of wetlands and Waters of the United States. A permit must be obtained from the U.S. Army Corps of Engineers (USACE) prior to dredging or discharging dredged or fill materials into any “Waters of the United States” or wetlands. Waters of the United States are broadly defined in the USACE regulations to include navigable waterways, their tributaries, lakes, ponds, and wetlands. Wetlands are defined as: “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that normally do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas” (USACE 1986). Wetlands that are not specifically exempt from Section 404 regulations (such as drainage channels excavated on dry land) are considered to be “jurisdictional wetlands.” USACE is required to consult with the USFWS, NMFS, USEPA, and SWRCB in carrying out its discretionary authority under Section 404 of the CWA.

Executive Order 11990—Protection of Wetlands

Executive Order 11990 was passed in 1977, in furtherance of NEPA, to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. If there is no practicable alternative to locating in or affecting wetlands, a lead agency shall act to minimize potential harm to the wetlands. A lead agency shall also act to restore and preserve the natural and beneficial values of wetlands as part of the analysis of all alternatives under consideration.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act is the primary law governing marine fisheries management in Waters of the United States. It was enacted in 1976 and amended in 1996 and 2006. Passage of the act created eight regional fishery management councils to manage the fisheries and promote conservation. The 1996 amendments focused on rebuilding overfished fisheries, protecting essential fish habitat, and reducing the

amount of incidental fish caught, by controlling annual catch limits. In 2006, the act was further amended to promote fisheries stock recoveries.

3.1.2 Affected Environment

Both natural and manmade elements frame the character of the environment. The study area includes the VA Transfer Parcel and the surrounding area, specifically the Alameda Point Northwest Territories development area (see Figures 3.1-1 and 3.1-2). The land comprising the VA Transfer Parcel was created during fill activities in the first half of the twentieth century and is essentially flat and lies just above sea level. The area is surrounded by the San Francisco Bay to the south and west and the Oakland Estuary to the north. The Port of Oakland is situated farther to the north of the estuary. To the east lie developed industrial and urban lands with a row of large aircraft hangars immediately east of the study area. The study area is occupied by former runways and taxiways interspersed with vegetated areas and contains vacant airfield support structures.

Habitat Evaluation

Before fieldwork was conducted, a search was made of the California Department of Fish and Game's California Natural Diversity Database for the Oakland West U.S. Geological Survey (USGS) 7.5-minute quadrangle and eight adjacent quadrangles. In addition, a species list was obtained from the USFWS for the Oakland West quadrangle including all lands within 5 miles of VA Transfer Parcel, and the California Native Plant Society's *Inventory of Rare and Endangered Plants* was reviewed for the most recent distribution information for Federally listed plant species (AECOM, 2008 and 2011).

Aerial images of the VA Transfer Parcel were examined for potential vegetation and wildlife habitats. Reconnaissance-level surveys of most of VA Transfer Parcel were conducted on February 20 and June 13, 2008.

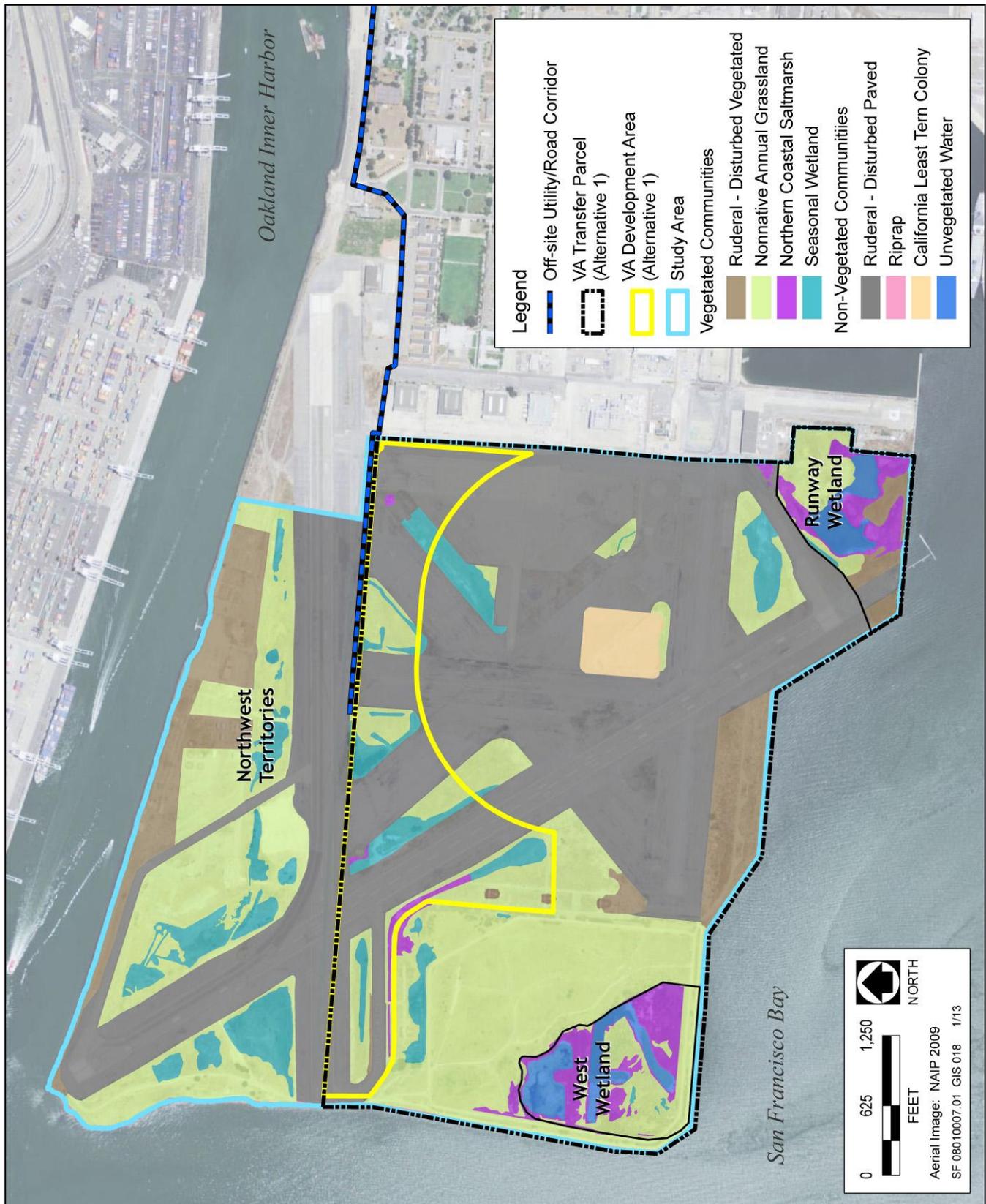
In addition, on May 16, 2008, and June 13, 2008, focused botanical surveys were conducted at the VA Transfer Parcel, and general biological conditions were noted. All distinct habitat types were identified, and all plant and wildlife species observed or detected by sign were recorded. cursory observations were made with binoculars from the edge of the fenced boundary at the northwest corner of the point on February 20, 2008. In addition, a follow-up survey was conducted on May 21, 2012 to review portions of the VA Transfer Parcel added under Alternative 2 and not surveyed in 2008.

Vegetation and Wildlife Habitat

The vegetation and wildlife habitats located within the VA Transfer Parcel is provided in Table 3.1-1, illustrated in Figures 3.1-1 and 3.1-2, and described below.

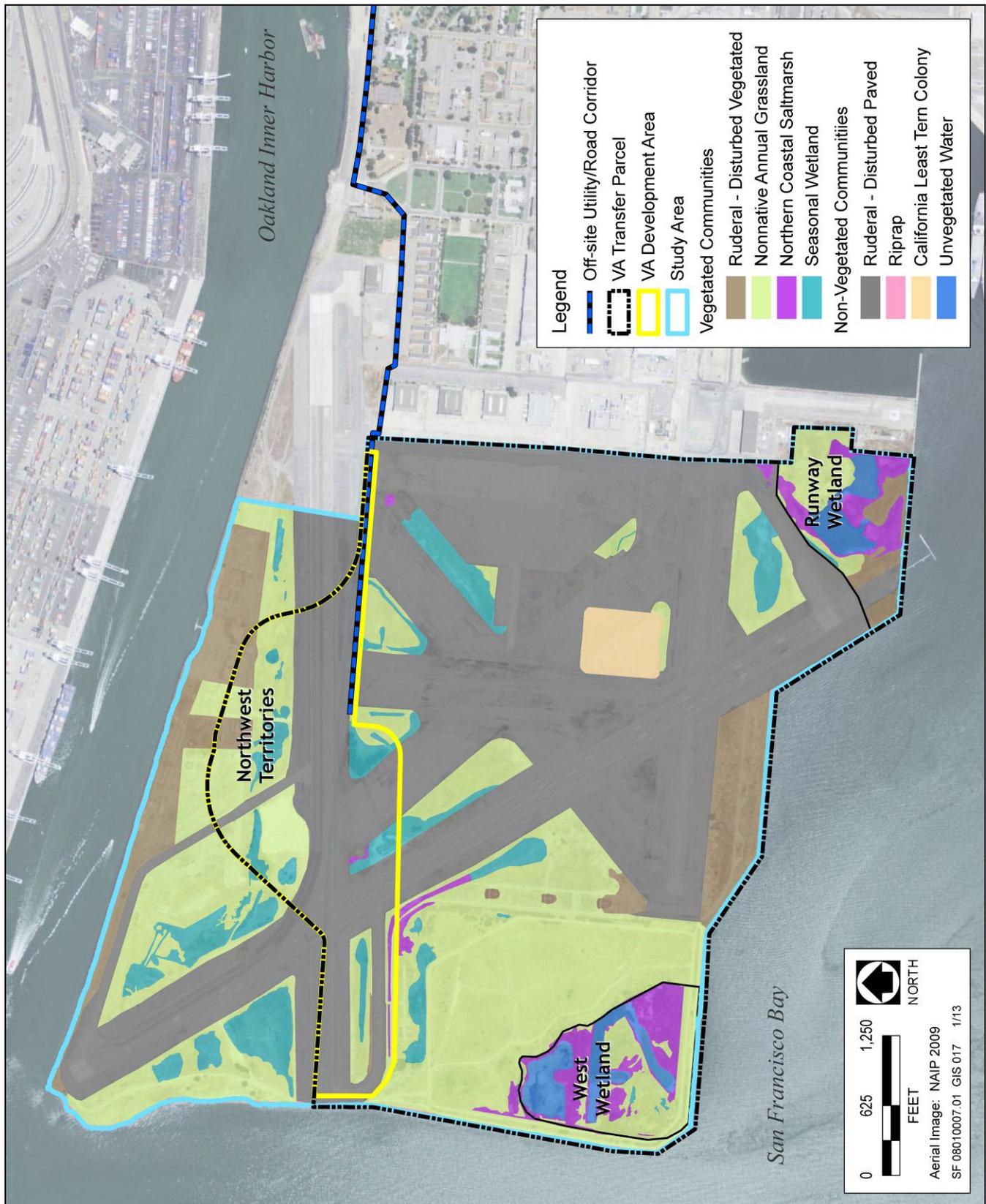
Ruderal-Disturbed (Vegetated and Paved)

The VA Transfer Parcel, and the larger Alameda Point area, sits on fill and has been severely disturbed by cut-and-fill operations and by grading, paving, and development. Ruderal-disturbed habitat is typical of disturbed lands on which the native vegetation has been completely removed by human activities, such as grading, disking, cultivation, or other surface disturbances. Disturbed areas, if left undeveloped, may become re-colonized by exotic species and native species. Native vegetation may ultimately become at least partially restored if the soils are left intact and there is no further disturbance.



Source: Data compiled by AECOM in 2012

Figure 3.1-1: Vegetation and Wildlife Habitat, VA Transfer Parcel (Alternative 1)



Source: Data compiled by AECOM in 2012

Figure 3.1-2: Vegetation and Wildlife Habitat, VA Transfer Parcel (Alternative 2)

Table 3.1-1: Vegetation and Wildlife Habitat in the VA Transfer Parcel (Alternatives 1 and 2)

Type	Alternative 1		Alternative 2	
	VA Transfer Parcel (acres)	VA Development Area (acres)	VA Transfer Parcel (acres)	VA Development Area (acres)
Ruderal - Disturbed (vegetated and paved)	310.2	69.1	353.9	68.0
Nonnative Annual Grassland	154.6	26.6	180.0	32.8
Northern Coastal Salt Marsh	24.1	2.1	24.1	1.1
Seasonal Wetland	26.6	13.2	31.7	10.5
Riprap	4.9	0.0	4.9	0.0
California Least Tern Colony	9.5	0.0	9.5	0.0
Unvegetated Waters	19.5	0.0	19.5	0.0
Total	549.4	111.0	623.6	112.4

Ruderal-disturbed habitat varies in vegetative cover and composition because of, among other causes, the degree of disturbance and vegetation re-colonization. There are two distinct ruderal-disturbed sub-habitats: (1) ruderal-disturbed vegetated habitat containing a greater coverage of vegetation, resulting mainly from soft sand or soil substrate, and (2) ruderal-disturbed paved habitat containing very sparse vegetation and a hard paved substrate. Ruderal-disturbed paved habitat represents the largest habitat, in terms of acreage, within the study area.

Ruderal-disturbed vegetated habitat in the study area is characterized by large expanses of nearly solid iceplant (*Carpobrotus edulis*) to large patches of iceplant interspersed with bare ground. Plant species present in these habitats include iceplant, rosy iceplant (*Drosanthemum floribundum*), and woolly sunflower (*Eriophyllum* sp.). In the upland areas, ruderal-disturbed habitat intergrades with nonnative annual grassland habitat. In these areas, patches of iceplant are interspersed with grasses and forbs typical of the nonnative annual grassland habitat described below.

Wildlife species generally associated with ruderal-disturbed lands include raccoon (*Procyon lotor*), opossum (*Didelphus virginianus*), European starling (*Sturnus vulgaris*), and mourning dove (*Zenaida macroura*). Killdeer (*Charadrius vociferus*) are also often associated with open disturbed substrates. Long-billed curlew (*Numenius americanus*) can be associated with open areas with clumps of vegetation. Wildlife species that feed on seeds or other parts of the vegetation, including finches, goldfinches, sparrows, and a variety of rodents, may occur in this habitat type. Insects present in disturbed habitats provide food for species such as western meadowlark (*Sturnella neglecta*), Brewer’s blackbird (*Euphagus cyanocephalus*), red-winged blackbird (*Agelaius phoeniceus*), loggerhead shrike (*Lanius ludovicianus*), horned lark (*Eremophila alpestris*), and western fence lizard (*Sceloporus occidentalis*). This community can support a variety of predators, including snakes, various raptors, and red fox (*Vulpes vulpes*). The study area’s close proximity to the waters of San Francisco Bay makes areas of ruderal-disturbed paved habitat on site suitable for shorebirds, such as CLT and Caspian tern (*Sterna caspia*), which typically nest on gravel or sandy substrates.

The Alternative 1 VA Transfer Parcel contains approximately 310.2 acres of ruderal-disturbed habitat. Of this area, approximately 69.1 acres are located in the Alternative 1 VA Development Area. The Alternative 2 VA

Transfer Parcel contains approximately 353.9 acres of ruderal-disturbed habitat. Of this area, approximately 68.0 acres are located within the Alternative 2 VA Development Area (Table 3.1-1; Figures 3.1-1 and 3.1-2).

Nonnative Grassland

Nonnative grassland is generally found in open areas in valleys and foothills throughout coastal and interior California (Holland, 1986). Nonnative grasses and weedy annual and perennial forbs, primarily of Eurasian/Mediterranean origin, dominate this vegetation type, probably because of human disturbance. Scattered native grass and wildflower species, representing remnants of the original vegetation, may also be common.

Nonnative annual grassland within the study area exists as a patchwork of perennial and annual grasses that intergrades and forms ecotones with ruderal-disturbed habitat, seasonal wetlands, and salt marsh (Figures 3.1-1 and 3.1-2). Characteristic annual and perennial nonnative grasses found in this habitat on site include tall fescue (*Festuca arundinacea*), velvet grass (*Holcus lanatus*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), Italian ryegrass (*Lolium multiflorum*), soft chess (*Bromus hordeaceus*), pampas grass (*Cortaderia selloana*), and annual bluegrass (*Poa annua*). Common nonnative forbs found include cranesbill (*Geranium dissectum*), red-stemmed filaree (*Erodium cicutarium*), vetch (*Vicia* sp.), cut-leaf plantain (*Plantago coronopus*), English plantain (*Plantago lanceolata*), iceplant, curly dock (*Rumex crispus*), and field bindweed (*Convolvulus arvensis*). Although this habitat is dominated by nonnative species, the native species coyote brush, saltgrass (*Distichlis spicata*), pickleweed (*Salicornia virginica*), and alkali heath (*Frankenia salina*) are also present.

Grassland habitats, both native and nonnative, attract reptiles and amphibians such as alligator lizard (*Gerrhonotus* spp.), western fence lizard, and Pacific slender salamander (*Batrachoseps attenuatus*), which feed on invertebrates found in this vegetation community. This habitat also attracts seed-eating and insect-eating species of birds and mammals. California quail (*Callipepla californica*), mourning dove, and western meadowlarks are a few granivores that nest and forage in grasslands. Insectivores such as the western scrub-jay (*Aphelocoma californica*), barn swallow (*Hirundo rustica*), and northern mockingbird (*Mimus polyglottos*) use the habitat for foraging only. Grasslands are important foraging grounds for insectivorous bats such as myotis (*Myotis* spp.) and pallid bats (*Antrozous pallidus*).

A large number of other mammal species, such as the California vole (*Microtus californicus*), deer mouse (*Peromyscus maniculatus*), Botta's pocket gopher (*Thomomys bottae*), Beechey (California) ground squirrel (*Spermophilus beecheyi*), red fox, striped skunk (*Mephitis mephitis*), and black-tailed jackrabbit (*Lepus californicus*), also forage and nest or den within grasslands. Small rodents attract raptors such as owls, which hunt at night, as well as day-hunting raptors such as the red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), and white-tailed kite (*Elanus leucurus*), among others. Some amphibian species that breed in adjacent ponds or wetlands may also aestivate (or spend the summer) in small mammal burrows within portions of these habitats.

Alternative 1 VA Transfer Parcel contains approximately 154.6 acres of nonnative annual grassland habitat. Of this area, approximately 26.6 acres are located in the Alternative 1 VA Development Area. The Alternative 2 VA Transfer Parcel contains approximately 180.0 acres of nonnative annual grassland habitat. Of this area, approximately 32.8 acres are located in the Alternative 2 VA Development Area (Figures 3.1-1 and 3.1-2).

Northern Coastal Salt Marsh

Northern coastal salt marsh consists of highly productive, herbaceous, and suffrutescent perennials up to 4 feet tall. Usually found along sheltered margins of bays, lagoons, and estuaries, this plant community develops a dense to moderate cover. Subject to continuously fluctuating salinity and water levels, northern coastal salt marsh is typically dominated by a low diversity of salt-tolerant hydrophytes.

Northern coastal salt marsh is located in a thin strip on the northern edge of the Northwest Territories along the Oakland Inner Harbor, the western edge of the VA Transfer Parcel area, the West Wetland, and the Runway Wetland areas (Figures 3.1-1 and 3.1-2). The majority of this habitat is peripheral to the proposed development alternative sites. Some of these areas are connected to San Francisco Bay via stormwater drains. On site the salt marsh is dominated by pickleweed (*Salicornia pacifica*) and saltgrass. Characteristic nonnative species include cranesbill, red-stemmed filaree, Mediterranean barley, bird's-foot trefoil, red sandspurry (*Spergularia rubra*), and bull thistle (*Cirsium vulgare*), among others. Northern coastal salt marsh may be considered Waters of the United States.

Both migratory and resident bird species utilize this habitat. Resident species like the American avocet (*Recurvirostra americana*) and black necked stilt (*Himantopus mexicanus*) use northern coastal salt marsh for nesting and breeding, while western sandpipers (*Calidris mauri*), marbled godwits (*Limosa fedoa*), and long-billed dowitcher (*Limnodromus scolopaceus*) are migratory shorebirds that use salt marsh habitat for resting and feeding. The savannah sparrow (*Passerculus sandwichensis*) nests in pickleweed and peripheral halophytes in upper marsh and upland transitional zones and the salt marsh common yellowthroat (*Geothlypis trichas sinuosa*) nests in tidal and nontidal brackish and freshwater marshes primarily in the South Bay, south of the project site. Non-breeding birds, including larger shorebirds, swallows, blackbirds, and other species roost in large numbers in salt marsh, while several species of ducks, and in a few locations, herons and egrets, also nest in salt marshes. The California vole (*Microtus californicus*) occurs here as well, and is often the most common small mammal. Salt marshes may also be utilized by fishes for breeding, rearing, and foraging for numerous insects and aquatic invertebrates.

The Alternative 1 VA Transfer Parcel contains approximately 24.1 acres of northern coastal salt marsh. Of this area, approximately 2.1 acres are located in the Alternative 1 VA Development Area. The Alternative 2 VA Transfer Parcel contains approximately 24.1 acres of northern coastal salt marsh habitat. Of this area, approximately 1.1 acres are located in the Alternative 2 VA Development Area (Table 3.1-1; Figures 3.1-1 and 3.1-2). The northern coastal salt marsh that occurs under each alternative is connected to San Francisco Bay via stormwater drains. In high-water-table conditions this situation has caused the salt water to combine with surface water.

Seasonal Wetland

Seasonal wetlands support annual and perennial native and nonnative wetland indicator plant species. This plant association typically resembles a wetland community only following the wet season; it dries up rapidly with the onset of summer and the wetland indicator species go dormant. During the dry season, such sites may not be readily recognizable as wetland species go to seed and typical upland grasses and forbs become established.

Within the VA Transfer Parcel, seasonal wetlands occur where water ponds and soils remain saturated during the growing season. Seasonal wetlands are found primarily in the Main Runway Area between the runways of the former airfield, in the southeast corner (i.e., Runway Wetland), and in the southwest corner (i.e., West Wetland) of the VA Transfer Parcel (Figures 3.1-1 and 3.1-2). The approximately 32-acre Runway Wetland encompasses two perennial ponds, surrounded by salt marsh and ruderal-disturbed lands. These two ponds are hydrologically connected to the San Francisco Bay through three openings in the southern rock seawall, and are connected to each other during periods of elevated water levels. The West Wetland is comprised of a linear, channel-like pond to the south and a second pond to the north, both of which are perennial. A strip of land ranging from 100- to 150-foot wide lies adjacent to the seawall, and separates the ponds from the Bay (Battelle and BBL, Inc. 2008 and Tetra Tech 2004). Both the Runway and West Wetland are located outside of the VA Development Area.

Seasonal wetlands are also located outside the northern border of the VA Transfer Parcel area within Alameda Point's Northwest Territories (Figures 3.1-1 and 3.1-2). These wetlands form where water ponds and soils remain saturated during the growing season and are found mainly in the tarmac area between the runways of the former airfield.

Plant species found in seasonal wetlands on site include nonnative species such as tall fescue, velvet grass, Bermuda grass, Mediterranean barley, curly dock, annual bluegrass, Italian ryegrass, bird's-foot trefoil (*Lotus corniculatus*), and loosestrife (*Lythrum hyssopifolia*). Native species present include common nut-sedge (*Cyperus eragrostis*), Baltic rush (*Juncus balticus*), toad rush (*Juncus bufonius*), rusty popcorn-flower (*Plagiobothrys nothofulvus*), and wooly marbles (*Psilocarphus* sp.). Seasonal wetlands may be considered Waters of the United States.

Though seasonal wetlands found within the VA Transfer Parcel are of low to medium quality, well developed seasonal wetland habitat can be very productive for wildlife in that they may offer water, food, and cover for a variety of species. Amphibians such as pacific treefrog (*Pseudacris regilla*) commonly occur in this habitat. Red-winged blackbird, common yellowthroat (*Geothlypis trichas*), and killdeer often use these areas for foraging and nesting. Snowy egret (*Egretta thula*), green heron (*Butorides virescens*), black-crowned night-heron (*Nycticorax nycticorax*), and mallard (*Anas platyrhynchos*), as well as numerous migrating shorebirds also forage in this habitat. Mammals commonly present in this habitat include California meadow vole, raccoon, striped skunk, and gray fox (*Urocyon cinereoargenteus*). This habitat may provide foraging and drinking areas for aerial and ground feeding insectivorous bats, such as *Myotis* species.

The Alternative 1 VA Transfer Parcel contains approximately 26.6 acres of seasonal wetland habitat. Of this area, approximately 13.2 acres are located in the Alternative 1 VA Development Area. The Alternative 2 VA Transfer Parcel contains approximately 31.7 acres of seasonal wetland habitat. Of this area, approximately 10.5 acres are located in the Alternative 2 VA Development Area (Table 3.1-1; Figures 3.1-1 and 3.1-2). Because of their location on a former airfield, these wetland areas are dispersed in a matrix composed of more asphalt than grassland or upland; therefore, these wetlands are considered medium to low quality. USACE completed a site verification field investigation of the VA Development Parcel on November 21, 2012. See Appendix C, which includes the Wetland Delineation and Preliminary Jurisdictional Determination Report and the verification letter from USACE dated March 13, 2013, for more information on study area seasonal wetlands (AECOM, 2012).

Riprap

Riprap is a non-natural permanent cover of rock, concrete, or other material, placed to protect shoreline. Riprap absorbs and deflects the energy of the waves and the gaps in between the riprap help slow water flow. This helps protect the land while reducing the erosion and scour of the shoreline edge.

There is very little or no vegetation in this habitat, although it is a site on which bay algae, other organic debris, flotsam, and jetsam collect. This habitat may be used by invertebrates and smaller mammals and birds for cover and foraging. Larger birds—such as California brown pelican and double-crested cormorant (*Phalacrocorax auritus*)—may utilize the rock riprap for roosting. On the aquatic side, subtidal portions of the riprap may be used as a refuge and grazing substrate for fishes and other aquatic animals.

Approximately 4.9 acres of riprap are found in the Alternative 1 and Alternative 2 VA Transfer Parcels. As shown in Figures 3.1-1 and 3.1-2, no riprap is located in the VA Development Area under Alternative 1 or Alternative 2.

California Least Tern Colony

The California Least Tern (CLT) (*Sternula antillarum browni*), Federally listed as endangered, nests and roosts on a ruderal-disturbed paved portion of the former NAS Alameda airfield area and forages in the adjacent open water (Figures 3.1-1 and 3.1-2). Its primary nesting area is an approximately 9.5-acre fenced section on the southern portion of the former airfield area in the VA Transfer Parcel. This area, known as the CLT colony, is continually managed to promote its use by CLT, including the regular removal of weedy vegetation and the introduction of gravel, seashells, and other nesting area substrates. The CLT was first documented nesting at the former NAS Alameda in 1976, while the air station and its runways were still active. Since that time and the closure of NAS Alameda, the colony has grown to be the largest in the San Francisco Bay Area. As seen in Figures 3.1-1 and 3.1-2, the existing CLT is not located in the VA Development Area under either Alternative 1 or Alternative 2, and a buffer from the boundary of this nesting colony (i.e., the fence) has been proposed to limit human activity close to the colony. No CLT nesting is known to occur in the VA Development Area. For an additional discussion on the CLT, see Section “Federally Listed Animal Species” below.

Unvegetated Waters

Unvegetated waters are the portions of permanent or intermittent water bodies such as lakes and pools, springs, canals, ponds, rivers and streams, with sparse to no vegetation cover. These areas provide refuge and foraging habitat to a variety of birds migrating through and inhabiting Alameda Point.

Unvegetated waters are found in the VA Transfer Parcel Runway Wetland and West Wetland areas indicated on Figures 3.1-1 and 3.1-2 as well as one small area of Oakland Estuary that encroaches within the straight-line boundary of the study area north of the Northwest Territories. At the Runway Wetland there are two perennial open water areas associated with the salt marsh and they are connected during high water to San Francisco Bay. There are three openings in the riprap that connect the ponds to the bay. Within the West Wetland, the canal-shaped pond was created by removing dredged materials to cover the landfill or disposal area. The northernmost pond is connected to the Bay by a culvert and both ponds are connected when inundated during higher tides.

In the Alternative 1 and Alternative 2 VA Transfer Parcels, approximately 19.5 acres of unvegetated waters are located in the Runway Wetland and the West Wetlands. These areas contain seasonal or perennial ponding water that may be considered Waters of the United States. As seen in Figures 3.1-1 and 3.1-2, no unvegetated waters are located in the VA Development Area under either Alternative 1 or Alternative 2.

Off-Site Utility/Road Corridor

An off-site utility/road corridor would be constructed to the east of the VA Development Area and would be located outside the VA Transfer Parcel on property located within Alameda Point. The off-site corridor would provide vehicle and bicycle access and provide a utility right-of-way to the VA Development Area from the City of Alameda and is proposed to run along West Redline Avenue and connect to Main Street. The off-site corridor would encompass approximately 6 acres of property outside of the VA Transfer Parcel. This area is comprised of developed urban land consisting of former NAS Alameda buildings (currently utilized for commercial, administrative, and office uses), paved surface roads, sidewalks, managed lawns, non-native vegetation, recreational parks, and street trees. The off-site utility/road corridor does not contain any sensitive habitat areas. The existing habitat only supports a few avian species and other common terrestrial wildlife that are common in disturbed and urban settings.

Adjacent Marine Environment

The open waters adjacent to the study area are typical of San Francisco Bay waters in general and have mainly silty mud and sand substrates that are naturally not more than 25 feet deep, although dredging operations for shipping operations in the Oakland Inner Harbor and Alameda pier area may deepen water to more than 50 feet. The San Francisco Bay is an estuarine system with a mixture of saline oceanic waters from the Pacific Ocean and outflow of fresh water from both local watersheds and distant watersheds, such as those from Coyote Creek and Guadalupe Rivers to the south and the Petaluma, Napa, Sacramento, and San Joaquin Rivers to the north. Vegetated habitats in the San Francisco Bay include sublittoral kelp populations and eelgrass (*Zostera marina*) beds.

Eelgrass beds exist both north of Alameda Point along the northern edge of the Oakland Inner Harbor and adjacent to the Alameda Point area at the southeastern terminus of the breakwater. Benthic, or bottom-dwelling, fauna in the open waters of San Francisco Bay include a large variety of invertebrates, such as polychaetes (i.e., marine worms), crustaceans (e.g., crabs, amphipods, and isopods), mollusks such as clams and mussels, echinoderms, and fishes such as halibut and sole. Pelagic organisms also are widely observed and include planktonic organisms (e.g., phytoplankton, copepods, and larval animals), crustaceans (e.g., shrimps and mysids), and many bony fish and shark species. These lower taxa provide a prey base for the higher taxa, such as marine mammals and birds, which also are commonly present in this environment. The VA Transfer Parcel does not have any marine habitats; however, the western and southern boundaries of the parcel border San Francisco Bay, which is considered essential fish habitat for several fish species. The VA Development Area does not border any marine habitats.

Federally Listed Threatened and Endangered Species

Federally Listed Plant Species

Based on a review of California Department of Fish and Game's (CDFG) California Natural Diversity Database (CDFG 2011), the California Native Plant Society's *Inventory of Rare and Endangered Plants* (CNPS 2001, 2010), USFWS species list (USFWS 2010), and knowledge of the region, it was determined that 16 Federally listed plant species have been recorded as occurring within 5 miles (i.e., Oakland West USGS 7.5-minute quadrangle and 8 surrounding quadrangles) of the Proposed Action. A list of the 16 Federally listed plant species is presented in Appendix B (Biological Resources Supporting Information). Based on a review of available documentation and the results of reconnaissance and focused botanical surveys conducted during the species blooming periods in 2008, all 16 of the plant species are presumed absent from the VA Transfer Parcel or are not expected to occur due to a lack of suitable habitat and are not evaluated further.

The VA Transfer Parcel and VA Development Area under both Alternative 1 and Alternative 2 does not contain any designated or proposed critical habitat or Federally listed plant species.

Federally Listed Animal Species

Twenty six Federally listed terrestrial (i.e., amphibians, reptiles, birds, mammals, and insects) and marine (i.e., fish, crustaceans, and mammals) animal species have been recorded as occurring within 5 miles (i.e., Oakland West USGS 7.5-minute quadrangle and 8 surrounding quadrangles) of the Proposed Action. Based on a review of available documentation, including the results of focused surveys conducted for the Proposed Action and by local groups, 12 of the Federally listed terrestrial and all 10 of the marine animal species are presumed absent from the VA Transfer Parcel or are not expected to occur due to a lack of suitable habitat or lack of nearby source populations or suitable connectivity to the project site from presently extant populations and are not evaluated further. A list of the Federally listed terrestrial and marine animal species occurring within 5 miles of the Proposed Action is presented in the Biological Assessment in Appendix B (Biological Resources Supporting Information).

The following four Federally listed terrestrial animal species are known to occur on or in the vicinity of the Proposed Action:

California Least Tern

As described in the "Vegetation and Wildlife Habitat Types" section above, the CLT, Federally listed as endangered, nests and roosts on a ruderal-disturbed paved portion of the former NAS Alameda airfield area (Figures 3.1-1 and 3.1-2) and forages in the adjacent open water. Its primary nesting area (CLT colony) is an approximately 9.5-acre fenced section on the southern portion of the former airfield area in the VA Transfer Parcel. The existing CLT colony is not located in the VA Development Area under either Alternative 1 or Alternative 2.

California Clapper Rail

The California clapper rail (*Rallus longirostris obsoletus*), Federally listed as endangered, has been observed in the *Spartina alterniflora* (and hybrid with *S. foliosa*) and pickleweed-dominated marshes 3 to 4 miles away (to the north and south) as recently as 2008. However, they have never been documented within the VA Transfer Parcel despite twice-monthly Friends of Alameda Wildlife Refuge (FAWR) bird counts which began in the spring of 2004 and biological surveys conducted within the VA Transfer Parcel. The VA Transfer Parcel lacks the important habitat elements for the species, including taller salt marsh vegetation such as *Scirpus* spp. and *Spartina* spp., including deep channels with full tidal connection; thus, suitable nesting habitat is absent and the quality of potential foraging habitat is diminished. Therefore, the likelihood that California clapper rails would occur on site is extremely low.

Salt Marsh Harvest Mouse

Although suitable habitat is present for salt marsh harvest mouse (*Reithrodontomys raviventris*), Federally listed as endangered, within the Runway Wetland and West Wetland areas, trapping surveys have resulted in negative findings (Navy, 1995, 1997; Bias and Morrison, 1999; Harvey, 2009). The probability of dispersal onto the VA Transfer Parcel is extremely low given the small dispersal range of the species and the large areas of unsuitable habitat between the site and source populations. Therefore, the potential for salt marsh harvest mouse to occur on site is extremely low.

Western Snowy Plover

The western snowy plover (*Charadrius alexandrinus nivosus*), Federally listed as threatened, has been observed in past years on Bay Farm Island near the Oakland Airport (CDFG 2010); the last recorded observation was in 1979. Since then, western snowy plovers have been observed within the VA Transfer Parcel during the bird count surveys by FAWR biologists. Since the inception of the twice-monthly FAWR bird counts in the spring of 2004, one western snowy plover was observed in July of 2004 (Hurt 2006) and one in September of 2006 (Euing 2007). Western snowy plovers were observed nesting within the CLT colony during at least 2 years in the early 1980s (Feeney 1994, Feeney and Collins 1993, USN 1999, USFWS 2000). Given the past and recent occurrences within the VA Transfer Parcel and presence of suitable habitat, the western snowy plover is likely to continue to use the action area as a stopover site during migration, and potentially, as a nesting location. Suitable nesting habitat is located within the CLT colony and other tarmac areas, and suitable foraging habitat occurs in the intertidal mudflats of the Runway Wetland and the West Wetland.

The California brown pelican (*Pelecanus occidentalis*) uses Breakwater Island (located south of the Runway Wetland) as a winter roost. This species was formerly listed as endangered but has since recovered and was officially delisted on November 17, 2009 (USFWS, 2009). For this reason, the California brown pelican is not discussed further in this EA.

The VA Transfer Parcel, under both Alternative 1 and Alternative 2, does not contain any designated or proposed critical habitat for Federally listed wildlife species. The San Francisco Bay adjacent to Alameda Point is designated critical habitat for the Central California Coast steelhead (*Oncorhynchus mykiss*) District Population Segments (DPS) and the North American green sturgeon southern (*Acipenser medirostris*) DPS.

Common Wildlife and Special-Status Species

The VA Transfer Parcel is composed of developed and disturbed land that was previously utilized for military, industrial, and aircraft uses. The parcel is located entirely on manmade lands (i.e., fill material imported during the early to mid-20th century) and the majority of the parcel is situated on the inactive runways, taxiways, and other paved aircraft areas of the former NAS Alameda. The existing habitat only supports a few avian species and other common terrestrial wildlife that are common in disturbed and urban settings. Mammals recorded at the VA Transfer Parcel include striped skunks, Norway rats (*Rattus norvegicus*), Virginia opossums, gray foxes (*Urocyon cinereoargenteus*), red foxes, raccoons, Beechey ground squirrel, black-tailed hare, feral dogs (*Canis lupus familiaris*), feral cats (*Felis silvestris catus*), and a colony of domestic rabbits (*Oryctolagus cuniculus*). Western fence lizard is the only reptile recorded on site.

Raptor species documented on site include peregrine falcon (*Falco peregrinus*), Prairie falcon (*Falco mexicanus*), American kestrel (*Falco sparverius*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), red-tailed hawk, northern harrier, white-tailed kite, turkey vulture (*Cathartes aura*), great horned owl (*Bubo virginianus*), barn owl (*Tyto alba*), and short-eared owl (*Asio flammeus*). The western burrowing owl (*Athene cunicularia*), a California Species of Special Concern, has been documented on-site; however, as a predator species of CLT chicks, western burrowing owls and other predatory species are passively or actively relocated when necessary in compliance with the predator control program for CLT colony management. Because a long-term presence of burrowing owls on-site does not occur, this species is not discussed further.

Waterfowl and shorebird species recorded include Canada goose (*Branta Canadensis*), American coot (*Fulica Americana*), mallard, bufflehead (*Bucephala albeola*), lesser scaup (*Aythya affinis*), killdeer, western gull (*Larus occidentalis*), Wilson's snipe (*Gallinago delicate*), and willet (*Catoptrophorus semipalmatus*). Other bird species observed include loggerhead shrike, common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), Horned larks, western meadowlark, black phoebe (*Sayornis nigricans*), European starling, Brewer's blackbird, mourning dove, white-crowned sparrow (*Zonotrichia leucophrys*), rock dove (domestic pigeon, *Columba livia*), and house finch (*Carpodacus mexicanus*).

Habitat Linkages and Corridors

The VA Transfer Parcel is located within the far southwestern end of the former NAS Alameda property. Access to the site is limited to the public and is confined by urban development and the waters of the San Francisco Bay. Migration (i.e., habitat linkages and corridors) through the area is generally feasible only for bird species. The VA Transfer Parcel and its surrounding area serves as a migratory stopover for birds moving through the San Francisco Bay Area, including CLT (see above), which migrates to the western United States. In addition, parcel, contains suitable habitat, primarily the wetland habitats in the south and western portion of the parcel, which serves as a migratory linkage for many bird species. Although the Alternative 1 and Alternative 2 VA Development Areas are not located in the confined CLT colony, the area serves as a migratory stopover for other native birds traveling north-south along California's coast.

3.1.3 Environmental Consequences

Assessment Methods

The impact analysis compares projected future conditions to the affected environment, and identifies potential construction or operational impacts that can reasonably be anticipated to be caused by or result from the Proposed Action and alternatives.

On August 30, 2011, the Navy and VA submitted a Biological Assessment (BA) to the USFWS and requested formal Section 7 consultation, pursuant to Section 7(a)(2) of the ESA, for the Proposed Action, which at the time was the project as described under Alternative 1 in this EA. Following submission of the BA, the USFWS notified the Navy and VA on September 29, 2011 that they were unable to initiate formal consultation, citing a desire for additional information.. The USFWS, Navy, and VA then met numerous times to discuss the additional information needs as well as concerns regarding potential impacts of the project on the CLT. As a result of these discussions, the USFWS, Navy, VA, City of Alameda, and East Bay Regional Parks District (EBRPD) worked collaboratively to revise the project to minimize potential adverse affects of the Proposed Action on the CLT. This collaborative process resulted in the development of Alternative 2 (Preferred Alternative), which moved the proposed VA Development Area north, farther away from the CLT colony.

Following the development of the new alternative, the Navy and VA on May 24, 2012 requested formal Section 7 consultation for the proposed project as re-defined under Alternative 2. On August 29, 2012, the Navy and VA received a Biological Opinion (BO) from the USFWS concurring with the Navy and VA's determination on the Proposed Action (Preferred Alternative 2) (USFWS, 2012). More information on the BA and BO, including determination of effect and commitments to avoid and minimize potential impacts to the CLT are included below and in Appendix B (Biological Resources Supporting Information).

Alternative 1

Construction

Vegetation and Wildlife Habitat

Full build-out of the Alternative 1 VA Development Area would result in the modification or loss of approximately 20% (111.0 acres) of the existing vegetation and wildlife habitat area within the VA Transfer Parcel. The majority (86%) of the VA Development Area comprises previously disturbed and developed areas consisting of ruderal-disturbed vegetated and paved habitat (69.1 acres) and nonnative annual grassland (26.6 acres) situated on the former runways, taxiways, and aircraft parking areas of the former NAS Alameda. The remaining lands affected from development would be northern coastal salt marsh (2.1 acres) and seasonal wetland (13.2 acres) habitat. A summary of the vegetated and wildlife habitat potentially affected by Alternative 1 is included in Table 3.1-2.

Based on the habitat types present and the animal species generally found in the area, it is anticipated that impacts on ruderal-disturbed and nonnative annual grasslands within the VA Development Area would not result in adverse effects to habitat or vegetation, as they are generally sparse and are marginal habitat for local species.

Table 3.1-2: Potential Effects - Vegetation and Wildlife Habitat in VA Transfer Parcel (Alternative 1)

Type	VA Transfer Parcel		VA Development Area		
	Acres	Percent Total Area ¹	Acres	Percent Total Area ¹	Percent of Total Vegetation and Habitat Type within VA Transfer Parcel
Ruderal - Disturbed (vegetated and paved)	310.2	57%	69.1	62%	22%
Nonnative Annual Grassland	154.6	28%	26.6	24%	17%
Northern Coastal Salt Marsh	24.1	4%	2.1	2%	11%
Seasonal Wetland	26.6	5%	13.2	12%	50%
Riprap	4.9	<1%	0	0%	0%
California Least Tern Colony	9.5	2%	0	0%	0%
Unvegetated Waters	19.5	3%	0	0%	0%
Total	549.4	-	111.0	-	20%

Note:

¹ Percent calculations are approximate.

Approximately 13.2 acres of seasonal wetland and northern coastal salt marsh (2.1 acres) would be permanently impacted, an adverse impact, by the buildout of the VA Development Area under Alternative 1 (see Appendix C, which includes the Wetland Delineation and Preliminary Jurisdictional Report and the verification letter from USACE dated March 13, 2013). The northern coastal salt marsh is connected to San Francisco Bay via stormwater drains. In high-water-table conditions this situation has caused the salt water to combine with surface water.

These areas provide more suitable habitat for local plants and wildlife, especially local birds than the ruderal-disturbed and nonnative annual grassland habitats. However, as previously mentioned, the wetland and marsh habitat is located within a formerly developed area situated on the former NAS Alameda airfield and areas are dispersed within a matrix composed of more asphalt than grassland or upland. While the wetlands are generally well developed within that matrix, native species are few and overall species diversity and structural diversity is low. Therefore, these wetlands are considered medium to low quality.

The northern coastal salt marsh and seasonal wetlands within the VA Development Area are considered Waters of the United States and their disturbance would likely be subject to a CWA Section 404 permit prior to the start of construction. As part of the permitting process, VA would prepare a Section 404(b)(1) analysis in accordance with 40 CFR 230 to demonstrate that the Proposed Action represents the least environmentally damaging practicable alternative. Compensatory mitigation would be required to ensure no net loss to wetlands. Any compensatory mitigation proposed to offset unavoidable impacts to aquatic resources must conform to regulations specified in 40 CFR 230 (http://www.epa.gov/owow/wetlands/pdf/wetlands_mitigation_final_rule_4_10_08.pdf). Compensatory mitigation can be achieved through four methods: restoration of a previously existing wetland or other aquatic site, enhancement of an existing aquatic site's functions, creation of a new aquatic site, or preservation of an existing aquatic site. The mechanisms for providing compensatory mitigation are permittee-responsible compensatory mitigation, mitigation banks, and in-lieu fee mitigation. USACE is responsible for

determining the appropriate form and amount of compensatory mitigation required for loss of Waters of the United States. Generally, depending on the quality of wetlands, mitigation is provided at a minimum 1:1 ratio; that is, for every 1 acre affected, 1 acre of mitigation is provided.

To reduce the adverse impact (i.e., direct removal of, placement of fill into, or hydrological interruption of Federally protected wetlands resulting in a net loss) to the northern coastal salt marsh and seasonal wetlands habitat within the VA Development Area to less than significant, VA will implement **Mitigation Measure BIO-1**. With implementation there would be no significant impact to northern coastal salt marsh and seasonal wetlands habitats.

Mitigation Measure BIO-1

The Proposed Action is within the USACE San Francisco District's San Francisco Bay Wetland Mitigation Bank (Bank). Nontidal/seasonal wetland and other waters within the service area may be eligible to use the Bank for mitigation on a case-by-case basis (i.e., for projects with impacts to nontidal/seasonal wetlands or other waters that may have been historic tidal wetlands or other waters). VA proposes a replacement ratio of 1:1 and shall consult with USACE to determine if a Bank, in-lieu fee, or permittee-responsible mitigation is the appropriate mitigation. Should mitigation credits be unavailable at the Bank to suit the needs of the project, VA shall seek out other methods to mitigate permanent impacts to nontidal/seasonal wetlands in consultation with the USACE.

Direct impacts to existing vegetation and wildlife habitat areas would be limited to the VA Development Area. Under Alternative 1, the remaining portion of the VA Transfer Parcel, approximately 438 acres, including the existing CLT colony and adjacent ruderal disturbed, nonnative annual grassland, northern coastal salt marsh, and the West and Runway Wetlands, would be left undeveloped open space, and be preserved for future use of wildlife. The majority of the development would be landscaped or remain as open space and only limited areas would contain facility structures. Therefore, the habitat loss would be temporal because the existing small mammals, birds, and reptiles that currently use the grassland and ruderal disturbed habitats are adaptable to landscaped habitat. The landscaped areas would function similarly, as predator-supporting habitat, and would continue to support an alternative prey base for avian predators. In addition, existing paved surfaces (e.g., runways, taxiways, aircraft parking areas) would be removed from the VA Development Area and areas outside of building and structure footprints would be landscaped, increasing pervious surface area, adding managed vegetation, and improving habitat for common wildlife. The 438 acres of undeveloped open space and landscaped portions of the VA Development Area would be a beneficial impact.

There is the potential for indirect adverse effects from construction-related activities including sources of noise (e.g., construction traffic and the operation of construction equipment) and increased human presence during construction to spill over into the remaining VA Transfer Parcel, including the CLT colony. To minimize and avoid adverse effects on the CLT, VA will implement avoidance and minimization measures to control noise and other potential adverse effects that would be expected during construction. For a more detailed discussion of potential effects to the CLT colony, see "Federal Listed and Threatened Species" below. Given these conditions, construction-related activities would not result in a significant adverse indirect impact to the CLT colony and other vegetated and wildlife habitats.

Alternative 1 would result in the modification or loss of the existing vegetation and wildlife habitat area in an area limited to the VA Development Area (20% of the total VA Transfer Parcel). The majority of this area is comprised of marginal habitat (i.e., ruderal disturbed and nonnative annual grassland). To reduce adverse impacts to northern coastal salt marsh and seasonal wetlands located within the VA Development Area, VA will implement mitigation (i.e., **Mitigation Measure BIO-1**). In addition, habitat within the VA Development Area would be improved with the introduction of managed landscaping and the majority of the VA Transfer Parcel (80%), including the CLT colony and other existing wetlands (e.g., Runway and West Wetlands) would be left undeveloped open space. Therefore, Alternative 1 would not have a significant adverse construction-related impact on vegetated and wildlife habitat.

Off-Site Utility/Road Corridor

Construction of the off-site utility/road corridor would result in the installation of below-grade utilities and improvements to the existing paved surface roads. No sensitive habitat or protected plant or animal species are known to occur within this area, and therefore construction activities would not affect any sensitive biological resource and would only disturb an already densely developed urban environment. Alternative 1 would have no significant impact to biological resources within the off-site corridor.

Adjacent Marine Environment

No open water is located in the Alternative 1 VA Transfer Parcel, the VA Development Area is set back from the nearest open waters (i.e., Oakland Inner Harbor and San Francisco Bay), and no in-water work is proposed as part of the Proposed Action. Furthermore, development of a SWPPP (see Section 3.2 [Water Resources]) would minimize the potential for dust, accidental hazardous materials releases, and runoff during construction activities, thereby minimizing potential indirect effects on the adjacent marine environment. Construction activities would not have a significant impact on the adjacent marine environment or essential fish habitat.

Federally Listed Threatened and Endangered Species

Federally Listed Plant Species

As previously noted, the VA Transfer Parcel does not contain any designated or proposed critical habitat or Federally listed plant species. Therefore, Alternative 1 would have no construction-related impact to Federally listed or designated or proposed plant species and habitat.

Federally Listed Animal Species

Two Federally listed species, the CLT and western snowy plover, occur or have the potential to occur within the VA Transfer Area or surrounding area and/or be affected by the Proposed Action. CLT return each year to a fenced colony within the southern portion of the closed runway of the former NAS Alameda, and are considered to be present and breeding on site. The western snowy plover occurs occasionally within the VA Transfer Parcel or surrounding area, with the most recent sighting in September 2006. Although the VA Transfer Parcel contains suitable nesting habitat for western snowy plover, they have not been documented nesting on site since the 1980s. Regardless, western snowy plover is considered to have the potential to use the VA Transfer Parcel for both nesting and as a temporary stopover during migration. Because of their sporadic presence on-site, implementing

Alternative 1 may affect, but is not likely to adversely affect western snowy plover throughout the life of the project. Due to their presence in the VA Transfer Parcel, implementing Alternative 1 may affect, and is likely to adversely affect CLT throughout the life of the project. However, no direct loss of CLT nesting habitat would occur. Potential construction-related effects on the CLT and western snowy plover are discussed below. In addition, the analysis includes two other Federally listed animal species, California clapper rail and salt marsh harvest mouse, which have been known to occur only in the areas surrounding the VA Transfer Parcel.

The VA Transfer Parcel does not contain any Federally designated or proposed critical habitat. However, the waters of San Francisco Bay immediately adjacent to the VA Transfer Parcel (western and southern boundaries) fall within designated critical habitat for the Central California Coast steelhead DPS and the North American green sturgeon southern DPS. Because there is no open water within the VA Transfer Parcel and no in-water work proposed as part of VA's Proposed Action, there would be no direct effects to critical habitat for listed fish species. The project would employ standard prevention measures—such as a SWPPP, silt fences, and construction Best Management Practices—that would ensure there are no indirect effects to critical habitat within San Francisco Bay by minimizing noise, dust, and runoff. Therefore, Alternative 1 would have no construction-related impact (i.e., no effect) to Federally designated or proposed habitat.

The Navy and VA, in a BA submitted to the USFWS on August 30, 2011 requesting formal consultation under Section 7 of the ESA, and determined that the effects of Alternative 1 “may affect, and is likely to adversely affect” the CLT and “may effect, but is not likely to adversely affect” the western snowy plover. As identified above in section “Assessment Methodology,” the USFWS notified the Navy and VA that they were unable to initiate formal consultation on September 29, 2011. The USFWS, Navy, and VA then met numerous times to discuss concerns regarding potential impacts of the project on the CLT. As a result of these discussions, the USFWS, Navy, VA, City of Alameda, and EBRPD worked collaboratively to revise the project to minimize potential adverse affects of the Proposed Action on the CLT. This collaborative process resulted in the development of Alternative 2 (Preferred Alternative), which moved the proposed VA Development Area north, farther away from the CLT colony. Therefore, the Navy and VA did not receive concurrence from USFWS on their August 30, 2011 affects determination for Alternative 1.

Appendix B includes copies of the consultation letters. A description of the potential effects to the CLT and western snowy plover and a summary of the avoidance and minimization measures that VA would implement to minimize adverse impacts to the CLT and western snowy plover is provided below. If VA were to proceed with Alternative 1, VA would complete formal consultation under Section 7 of the ESA as is legally required. Subsequent NEPA analysis would also be required to incorporate the findings and conclusions of the Section 7 formal consultation into the biological resources analysis for Alternative 1.

California Least Tern

Alternative 1 construction activities would take place within the VA Development Area, approximately 1,400 feet from the CLT colony. The remaining VA Transfer Parcel (approximately 438 acres), including the CLT colony would be left undeveloped open space.. No direct construction-related activities would occur outside the VA Development Area and would not result in the modification or direct disturbance of the CLT colony or the habitat immediately surrounding it. In addition, project construction would have no direct effects on CLT nesting or foraging habitat located outside the VA Transfer Parcel and VA Development Area.

Direct effects to the CLT from construction activities would primarily consist of increased noise and vibration, construction traffic, and operation of construction equipment, which could have an effect on the CLT colony. In addition, increased human activities associated with construction may increase habitat for predators of the CLT. To minimize or avoid any potential direct effects, including noise and vibration from construction activities within the VA Development Area, to the CLT, primary grading and site preparation activities would not occur during the CLT breeding season (April 1 through August 15). Additionally, a setback distance (approximately 1,400 feet) from the colony has been included that would limit potential impacts to nesting related to increased noise, lighting, or human presence. This setback area would be delineated using temporary construction fencing and would be overseen by approved biological monitors during the breeding season and remain in place during the non-breeding season. During the CLT breeding/nesting season, construction activities would be restricted to those activities that would not result in an increase in the ambient noise level and vibration in and around the CLT colony on the site. Pile driving and pavement demolition activities requiring the use of impact tools (e.g., hydraulic breakers, jack hammers, scarifiers, and compactors) would not occur during the species' nesting season because these activities and equipment have the potential to increase the ambient noise level and vibration in and around the CLT colony on the site.

There is the potential for indirect adverse effects from construction-related activities including sources of noise (e.g., construction traffic and the operation of construction equipment) and increased human presence during construction. To minimize and avoid adverse effects, VA, as described above, will implement conservation measures and best management practices to control noise and other potential effects that would be expected during construction. During the CLT breeding/nesting season, construction activities would be restricted to those activities that would not result in an increase in the ambient noise level and vibration in and around the CLT colony. To reduce the potential of adverse indirect effects of increased human presence during construction, a chain-link fence will be installed to establish a development setback area, preventing construction personnel and equipment from approaching the colony. Because stockpiled construction materials may provide additional cover, and garbage produced by construction waste and workers could attract predators, garbage will be properly disposed and a biological monitor will routinely check stockpiled construction materials for potential predators and other conditions. The off-site utility/road corridor alignments is proposed to follow the existing roadways, which have been used and in operation for decades in areas that contain no habitat for listed species and are well removed from any sensitive species habitat and would not have a significant effect on the CLT.

For additional information on the CLT, potential impacts, and proposed avoidance and mitigation measures see Appendix B (Biological Resource Supporting Information).

Western Snowy Plover

Current evidence suggests that western snowy plover visits the surrounding area sporadically as a foraging migrant. As long as the species retains this status, direct effects on the species are likely to be minimal. The increased presence of humans and equipment during construction would increase the likelihood of disturbances (e.g., noise, light) to foraging and resting birds. These impacts would be intermittent, and are unlikely to affect the use of the site by snowy plover. Potential indirect effects of the project action on western snowy plover are generally shared and similar to those identified for CLT, albeit on a smaller scale as this species is currently only sporadically present as a migrant. Potential indirect effects would arise from increased human activity near foraging and potential nesting areas (CLT colony) and the daily use of new structures in the vicinity of the of

these areas. Should the western snowy plover reestablish itself as a nesting species in the action area, effects on the species are likely to be identical to those identified for the CLT and thus the proposed avoidance and minimization measures for the CLT are also adequately protective. Based on current habitat use by the snowy plover, the effects of Alternative 1 would be minimal. Therefore, there would be no significant adverse impact on the western snowy plover resulting from construction.

For additional information on the western snowy plover, potential impacts, and proposed avoidance and mitigation measures see Appendix B (Biological Resource Supporting Information).

California Clapper Rail

Although California clapper rails have been observed in the *Spartina alterniflora* (and hybrid with *S. foliosa*) and pickleweed-dominated marshes 3 to 4 miles away (to the north and south) as recently as 2008, they have never been documented within the VA Transfer Parcel despite twice-monthly FAWR bird counts which began in the spring of 2004, and biological surveys conducted within the surrounding area. The VA Transfer Parcel lacks the important habitat elements for the species, including taller salt marsh vegetation such as *Scirpus* spp. and *Spartina* spp. and deep channels with full tidal connection; thus, suitable nesting habitat is absent and the quality of potential foraging habitat is diminished. Due to the surrounding unsuitable land uses isolating the VA Transfer Parcel from known populations, lack of documented observations within habitats on site despite regular avian surveys the last 8 years, and the low quality of salt marsh habitats for the species, the likelihood that clapper rails would occur within the action area is extremely low. Therefore, there would be no impact (i.e., no effect) on the California clapper rail resulting from construction.

Salt Marsh Harvest Mouse

Trapping surveys for salt marsh harvest mouse have resulted in negative findings. An 8-night live trapping survey conducted in 1995 detected no salt marsh harvest mouse present (USN 1995, 1997) within the Runway Wetland or West Wetland marsh areas at that time. A second live-trapping survey was conducted in October 2009 (H.T. Harvey & Associates, 2009), which again found no salt marsh harvest mouse within the wetlands on site. The results of these surveys suggest that salt marsh harvest mouse has never occurred within the wetlands on site due to its isolation from source populations elsewhere around San Francisco Bay (H.T. Harvey & Associates, 2009). Potential salt marsh habitat on site is isolated from other marshes with known salt marsh harvest mouse populations by a minimum of 3 miles of barriers such as water bodies and highly developed urbanized areas. As a result, the probability of dispersal onto the VA Development Area is extremely low given the small dispersal range of the species (Bias and Morrison 1999). Therefore, there would be no impact (i.e., no effect) on the salt marsh harvest mouse resulting from construction.

Common Wildlife and Special-Status Species

Common species would be affected through the removal of marginal habitat (non-native grasslands), and removal of existing vegetated areas within the VA Development Area. In addition, common wildlife in the VA Development Area would be subjected to increases in noise and dust associated with construction. As a result, some habitats would be reduced in extent during construction and some common species would temporarily decline in local abundance. However, potential impacts to common species and habitats would not be substantial due to the current low abundance of wildlife on the site. This is due to the extent of developed/urban land uses on

the site, the long history of site disturbance, the intensive nature of such disturbance in some areas, and the site's isolation from more extensive areas of natural habitat by the bay and by urban development in the project vicinity. Further, these species/habitats are abundant throughout many areas in the region, and the project site supports extremely small percentages of the populations. Consequently, any impacts of the project on common species and habitats would have a negligible effect on regional populations. In addition, habitat within the VA Development Area would be improved with the introduction of managed landscaping and the majority of the VA Transfer Parcel (80%) would be left undeveloped open space, which could be utilized by common wildlife. The majority of the development would be landscaped or remain as open space when compared to the limited area that would contain structures. Therefore, Alternative 1 would not have a significant adverse construction-related impact on common wildlife.

Habitat Linkages and Corridors

As previously described under "Habitat Linkages and Corridors," because the VA Transfer Parcel is confined by urban development and the San Francisco Bay, there are limited non-avian habitat linkages or corridors. Existing terrestrial habitats only support a few non-avian species that have recently pioneered from nearby source populations and are common in disturbed and urban settings. There would be no impacts on non-avian habitat linkages and corridors and therefore they are not analyzed further in this EA.

The VA Transfer Parcel is utilized as a migratory stopover and nesting area for birds migrating along the Pacific Flyway. In particular, the existing wetlands present along the western edge of the VA Development Area, the West Wetland and the Runway Wetland, provide foraging and nesting habitat for these species. However, all construction activities would take place only within the VA Development Area. The remaining VA Transfer Parcel, including the West Wetland and the Runway Wetland would be left undeveloped open space. No direct construction-related activities would occur outside the VA Development Area and would not result in the modification or direct disturbance of these areas. The wetland areas within the VA Development Area generally contain marginal habitat for migrating birds, but these areas may still be used by grassland species. The wetland areas within the VA Development are dispersed within a matrix composed of more asphalt than grassland or upland; therefore, these wetlands are considered medium to low quality, and a 1:1 replacement ratio is proposed for mitigation. Discussions with USACE would take place to discuss replacement or enhancement opportunities on site or other options would be considered until a mutual mitigation solution is agreed upon. Construction within the VA Development Area would result in a loss of less than 3% of wetland habitat and 3% of grassland habitat used for migratory species. Because the impacts to wetlands would require at minimum 1:1 compensatory mitigation resulting in no net loss of wetlands, and because the area is used by wildlife adapted to disturbed and urban environments, it is anticipated that this loss would not result in a significant adverse impact.

Operation

Vegetation and Wildlife Habitat

There would be no significant direct adverse impacts to existing vegetation and wildlife habitat areas from the operation of Alternative 1. The majority of all operational activities would be limited to the VA Development Area, with exception to the CLT conservation and management activities, grounds maintenance activities, and limited use of the existing bunkers by VA. Operations will also not have a direct effect on CLT nesting or

foraging habitat. Operational activities would occur year round but are removed from foraging and nesting habitats at a sufficient distance to avoid direct effects to the CLT.

There is the potential for indirect adverse effects to the CLT colony from operational activities including effects to habitat and foraging, increased predation, increased human activity, noise, and lighting. However, to minimize and avoid adverse effects on the CLT colony, VA will implement avoidance and minimization measures to control noise and other potential effects that would be expected during operation. These measures would also be expected to help minimize and avoid adverse effects on other habitat areas. For a more detailed discussion of potential effects to the CLT colony see section “Federal Listed and Threatened Species” below.

Off-Site Utility/Road Corridor

Alternative 1 would have no operational impact to biological resources within the off-site utility/road corridor.

Adjacent Marine Environment

Operational activities would have no impact on the adjacent marine environment or essential fish habitat.

Federally Listed Threatened and Endangered Species

Federally Listed Plant Species

The VA Transfer Parcel does not contain any designated or proposed critical habitat or Federally listed plant species. Therefore, Alternative 1 would have no construction-related impact to Federally listed or designated or proposed plant species and habitat.

Federally Listed Animal Species

As identified above, the CLT and western snowy plover, have potential to occur within the VA Transfer Area or surrounding area and/or be affected by the Proposed Action. Because of the sporadic presence of the western snowy plover, implementing Alternative 1 may affect, but is not likely to adversely affect western snowy plover throughout the life of the project. Due to their presence in the VA Transfer Parcel, implementing Alternative 1 may affect, and is likely to adversely affect CLT throughout the life of the project. Potential operational effects on the CLT and western snowy plover are discussed below. In addition, the analysis includes two other Federally listed animal species, California clapper rail and salt marsh harvest mouse, which have been known to occur only in the areas surrounding the VA Transfer Parcel.

Alternative 1 would have no operational impacts to Federally designated or proposed habitat, including the adjacent San Francisco Bay (i.e., designated critical habitat for the Central California Coast steelhead DPS and the North American green sturgeon southern DPS).

California Least Tern

Alternative 1 would not result in a significant adverse impact to the CLT or the CLT colony from operational activities. All operational activities would take place within the VA Development Area, approximately 1,400 feet from the CLT colony. The remaining VA Transfer Parcel (approximately 438 acres), including the CLT colony

would be left undeveloped open space with limited use for CLT conservation and management, grounds maintenance, and limited use of the existing bunkers. In addition, operation would have no direct effects on CLT nesting or foraging habitat located outside the VA Transfer Parcel.

Operations would have no direct effects on CLT nesting or foraging habitat. Operational activities would occur year round but are removed from foraging and nesting habitats at a sufficient distance to avoid direct effects to the CLT. There is the potential for indirect adverse effects from operational activities including sources of noise (e.g., traffic and occupation and use of proposed facilities), increased human presence, and lighting. In addition, occupation and activities within the VA Development Area would have the potential to have an effect on the CLT, including predation, perceived predation and human disturbance, and reduce the ability to conduct effective predator management at the site. To reduce the adverse effects as described above, VA will implement avoidance and minimization measures to reduce potential adverse impacts. The measures would include preparing and implementing a long-term monitoring and management plan; vegetation control and weed removal; maintaining the undeveloped portions of the VA Transfer Parcel; design and treating building and structures with anti-perching devices; limiting height of vegetation; preparing an implementing a predator management plan; restricting access to the undeveloped portion of the VA Transfer Parcel; limiting OPC and cemetery operations to daytime hours; managing and directing noise generated from occasional cemetery memorial services away from CLT colony; and all exterior lighting will be strategically placed, would be directional and point downward using shielded valences/surrounds, and with anti-perching devices.

For additional information on the CLT, potential impacts, and proposed avoidance and minimization measures see Appendix B (Biological Resource Supporting Information).

Western Snowy Plover

Alternative 1 would not result in a significant adverse impact to the western snowy plover from operational activities. As identified, current evidence suggests that western snowy plover visits the surrounding area sporadically as a foraging migrant. As long as the species retains this status, direct effects on the species are likely to be minimal. The increased presence of humans and other operational activities would increase the likelihood of disturbances (e.g., noise, light, etc.) to foraging and resting birds. These impacts would be intermittent, and are unlikely to affect the use of the site by snowy plover. Potential indirect effects of the project action on western snowy plover are generally shared and similar to those identified for CLT, albeit on a smaller scale as this species is currently only sporadically present as a migrant. Potential indirect effects would arise from increased human activity and the daily use of new structures in the vicinity. Should the western snowy plover reestablish itself as a nesting species in the action area, effects on the species are likely to be identical to those identified for the CLT and thus the proposed avoidance and minimization measures for the CLT are also adequately protective. Based on current habitat use by the snowy plover, the effects of Alternative 1 would be minimal. Therefore, there would be no significant adverse impact on the western snowy plover resulting from operation.

For additional information on the western snowy plover, potential impacts, and proposed avoidance and mitigation measures see Appendix B (Biological Resource Supporting Information).

California Clapper Rail

Due to the surrounding unsuitable land uses isolating the VA Transfer Parcel from known populations, lack of documented observations within habitats on site despite regular avian surveys the last eight years, and the low quality of salt marsh habitats for the species, the likelihood that clapper rails would occur within the action area is extremely low. Therefore, there would be no impact (i.e., no effect) on the California clapper rail resulting from operation.

Salt Marsh Harvest Mouse

As identified above, the probability of dispersal onto the VA Transfer Parcel is extremely low given the small dispersal range of the species (Bias and Morrison 1999). Therefore, there would be no impact (i.e., no effect) on the salt marsh harvest mouse resulting from operation.

Common Wildlife and Special-Status Species

Potential adverse impacts from operation of Alternative 1 to common species and habitats would not be significant due to the current low abundance of wildlife on the site. This is due to the extent of developed/urban land uses on the site, the long history of site disturbance, the intensive nature of such disturbance in some areas, and the site's isolation from more extensive areas of natural habitat by the bay and by urban development in the project vicinity. In addition, habitat within the VA Development Area would be improved with the introduction of managed landscaping and the majority of the VA Transfer Parcel would be left undeveloped open space, which could be utilized by common wildlife. Therefore, the habitat loss would be temporal, because the existing small mammals, birds, and reptiles that currently use the grassland and ruderal disturbed habitats are adaptable to landscaped habitat. The landscaped areas would function similarly, as predator-supporting habitat, and would continue to support an alternative prey base for avian predators.

Habitat Linkages and Corridors

Because ongoing operational activities at the VA facilities would be confined to the VA Development Area, impacts to migratory habitat in the remainder of the VA Transfer Parcel are not expected to occur. Further, because the CLT colony would be preserved, and potential future public access would be limited to the perimeter of this area these areas are anticipated to be utilized by wildlife through the operational period of the VA facilities. Therefore, operational impacts would not be significant.

Alternative 1 – Biological Resources Environmental Consequences Summary

The potential biological environmental consequences presented for Alternative 1 are those as described in the Biological Assessment initially submitted to USFWS. A BO was neither rendered nor formally requested from USFWS, therefore the Navy and VA did not receive concurrence from USFWS on their determination of effects on listed and threatened species resulting from Alternative 1. If VA were to proceed with Alternative 1, VA would complete formal consultation under Section 7 of the ESA as is legally required. Subsequent NEPA analysis would also be required to incorporate the findings and conclusions of the Section 7 formal consultation into the biological resources analysis for Alternative 1.

Alternative 2 (Preferred Alternative)

Construction

Vegetation and Wildlife Habitat

Effects under Alternative 2 would be similar to those described under Alternative 1, except that the VA Transfer Parcel would be 75 acres larger (larger area is comprised mostly of additional ruderal-disturbed and non-native annual grasslands) and the VA Development Area (less than 2 acres larger than Alternative 1) would be located farther north. Full build-out of the Alternative 2 VA Development Area would result in the modification or loss of approximately 18% (112.4 acres) of the existing vegetation and wildlife habitat area within the VA Transfer Parcel. The majority (89%) of the VA Development Area is comprised of previously disturbed and developed areas consisting of ruderal-disturbed vegetated and paved habitat (68.0 acres) and nonnative annual grassland (32.8 acres) situated on the former runways, taxiways, and aircraft parking areas of the former NAS Alameda. The remaining lands affected from development would be northern coastal salt marsh (1.1 acres) and seasonal wetland (10.5 acres) habitat. A summary of the vegetated and wildlife habitat potentially affected by Alternative 2 is included in Table 3.1-3.

Table 3.1-3: Potential Effects - Vegetation and Wildlife Habitat in VA Transfer Parcel (Alternative 2)

Type	VA Transfer Parcel		VA Development Area		
	Acres	Percent Total Area ¹	Acres	Percent Total Area ¹	Percent of Total Vegetation and Habitat Type within VA Transfer Parcel
Ruderal - Disturbed (vegetated and paved)	353.9	57%	68.0	60%	11%
Nonnative Annual Grassland	180.0	29%	32.8	29%	5%
Northern Coastal Salt Marsh	24.1	4%	1.1	1%	<1%
Seasonal Wetland	31.7	5%	10.5	9%	2%
Riprap	4.9	0%	0.0	0%	0%
California Least Tern Colony	9.5	0%	0.0	0%	0%
Unvegetated Waters	19.5	0%	0.0	0%	0%
Total	623.6	-	112.4	-	18%

Note:
¹ Percent calculations have been rounded and may not equal 100%.

Alternative 2 would result in the modification or loss of the existing vegetation and wildlife habitat area in an area limited to the VA Development Area (18% of the total VA Transfer Parcel). The majority of this area is comprised of marginal habitat (i.e., ruderal-disturbed and nonnative annual grassland). To reduce adverse impacts to northern coastal salt marsh and seasonal wetlands located within the VA Development Area, VA would implement mitigation (i.e., **Mitigation Measure BIO-1**). In addition, habitat within the VA Development Area would be improved with the introduction of managed landscaping and the majority of the VA Transfer Parcel

(82%), including the CLT colony and other existing wetlands (e.g., Runway and West Wetlands) would be left undeveloped open space.

There is the potential for indirect adverse effects from construction-related activities including sources of noise (e.g., construction traffic and the operation of construction equipment) and increased human presence during construction to spill over into the remaining VA Transfer Parcel, including the CLT colony. To minimize and avoid adverse effects on the CLT, VA will implement avoidance and minimization measures to control noise and other potential effects that would be expected during construction. These measures would also be expected to help minimize and avoid adverse effects on other habitat areas. For a more detailed discussion of potential effects to the CLT colony see section “Federal Listed and Threatened Species” below. Therefore, Alternative 2 would not have a significant adverse construction-related impact to the CLT colony and other vegetated and wildlife habitats.

Off-Site Utility/Road Corridor

Effects under Alternative 2 would be similar to those described under Alternative 1. Therefore, no significant impact to biological resources would occur within the off-site utility/road corridor.

Adjacent Marine Environment

Effects under Alternative 2 would be similar to those described under Alternative 1. Therefore, no significant impact to biological resources would occur on the adjacent marine environment.

Federally Listed Threatened and Endangered Species

Federally Listed Plant Species

As previously noted, the VA Transfer Parcel does not contain any designated or proposed critical habitat or Federally listed plant species. Therefore, Alternative 2 would have no construction-related impact to Federally listed or designated or proposed plant species and habitat.

Federally Listed Animal Species

Effects under Alternative 2 would be less than those described under Alternative 1. Potential effects to the California clapper rail and salt marsh harvest mouse, no impact, are identical to Alternative 1 and are not described in detail below. In addition, Alternative 2 would have no construction-related impact to Federally designated or proposed habitat.

The Navy and VA has determined that the effects of Alternative 2 (Preferred Alternative) “may affect, and is likely to adversely affect” the CLT and “may effect, but is not likely to adversely affect” the western snowy plover. As identified above in section “Assessment Methodology,” the Navy and VA coordinated with and consulted with the USFWS pursuant to Section 7(a)(2) of the ESA, as amended, on this determination. The Navy and VA received concurrence from USFWS, as documented in the USFWS BO, dated August 29, 2012, on the determination that the “proposed project is likely to adversely affect the least tern” and “that the proposed project may affect, but is not likely to adversely affect the snowy plover” (USFWS 2012). The USFWS BO states that the “proposed project will increase predation pressure, increase the perception of predation, and reduce the quantity and quality of foraging habitat, adversely affecting all life stages of the least tern at NAS Alameda, thereby

resulting in take of the least tern in the form of harm, through habitat modification and disruptions in breeding success, and harassment.” The USFWS BO concludes, “that this level of anticipated take is not likely to result in jeopardy to the least tern” (USFWS 2012).

Appendix B includes copies of the consultation letters. A description of the potential effects to the CLT and western snowy plover and a summary of the avoidance and minimization measures that VA will implement to reduce adverse impacts to the CLT and western snowy plover is provided below.

California Least Tern

Alternative 2, with the implementation of specific avoidance and minimization efforts, would not result in a significant adverse impact to the CLT from construction-related activities. All construction activities would take place within the VA Development Area, approximately 1,400 to 1,800 feet from the CLT colony. The remaining VA Transfer Parcel (approximately 511 acres), including the CLT colony would be left undeveloped open space. No direct construction-related activities would occur outside the VA Development Area and would not result in the modification or direct disturbance of the CLT colony or the habitat immediately surrounding it. However, implementation of Alternative 2 would result in the development of approximately 112 acres of currently vacant land (i.e., VA Development Area). The alignment of the majority of the VA Development Area under Alternative 2 is now located within a portion of the area known as the Northwest Territories, as identified in the City of Alameda 1996 Reuse Plan, which is farther away from the CLT colony than under Alternative 1. The development footprint under Alternative 2, was specifically designed to reduce the potential effects of the Proposed Action on the CLT, including providing and maintaining most of the site as undeveloped open space which provides a large buffer between the CLT colony and development. However, the reintroduction of uses within this former military airfield area would have the potential to have an effect on the CLT, including predation, perceived predation and human disturbance, and reduce the ability to conduct effective predator management at the site.

Direct effects to the CLT from construction activities would primarily consist of increased noise and vibration, construction traffic, and operation of construction equipment, which could have an effect on the CLT colony. In addition, increased human activities associated with construction may increase habitat for predators of the CLT. There is the potential for indirect adverse effects from construction-related activities including sources of noise (e.g., construction traffic and the operation of construction equipment) and increased human presence during construction. To reduce the adverse effects as described above, to the CLT to less than significant, VA will implement **Mitigation Measure BIO-2** to minimize the potential for harm and harassment of the CLT resulting from the project related activities. With implementation there would be no significant impact to the CLT from construction.

Mitigation Measure BIO-2

To minimize potential adverse effects of VA's Proposed Action, VA will implement specific avoidance and minimization measures, as identified in the 2012 USFWS BO (see Appendix B [Biological Resources Supporting Information]). The measures pertain to the Navy's fed-to-fed transfer and VA's subsequent construction and operation of the Proposed Action as described under Alternative 2 in this EA. The measures provide for the long-term conservation and management of the CLT, including implementing

land use restrictions for long-term maintenance, management, and monitoring of the CLT. A summary of the avoidance and minimization measures that VA will implement include the following:

- *The undeveloped portion of the VA Transfer Parcel will remain undeveloped, providing a buffer from human related activities, and will be managed in perpetuity for the long-term persistence and sustainability of the CLT colony.*
- *CLT management activities will continue at current levels or greater levels, as determined by an annual monitoring report. CLT colony management activities will include:*
 - *Vegetation control and weed removal within the undeveloped portions of the VA Transfer Parcel;*
 - *Maintenance of the fence surrounding the CLT colony;*
 - *Maintenance of the CLT colony and preparation for the breeding season by placement of appropriate substrates and other measures to enhance nesting habitat;*
 - *Breeding season monitoring of the CLT colony;*
 - *Management of feral cats and other terrestrial predators; and*
 - *Control of avian predators (e.g., gulls, corvids, and raptors).*
- *Preparation of a long-term monitoring and management plan and update as needed. The plan will be reviewed and approved by the USFWS.*
- *Preparation of a predator management plan to maintain protection from predator threats at current or lesser intensity. The plan will be reviewed and approved by the USFWS.*
- *VA will conduct an education program for all newly hired employees located at the VA Transfer Parcel.*
- *Lighting, including that for roads, building security, and public safety, will be designed to minimize nuisance nighttime light levels.*
- *VA will develop strategies to minimize erosion and introduction of pollutants into stormwater runoff according to RWQCB guidelines.*
- *VA will incorporate building and landscape design features to protect the CLT and its colony, including anti-perching features, limit the height of buildings, structures, and landscape plantings and features, and installing a permanent barrier along the VA Development Area to prevent unauthorized access into of the undeveloped portion of the VA Transfer Parcel.*
- *During CLT breeding season, a qualified biological monitor will be present, during all construction activities, to ensure that no activities adversely affect CLT using the colony.*
- *During the non-breeding season, a qualified environmental inspector will be present on site regularly throughout the non-breeding season.*

- *All refuse storage will be stored in secure, covered containers, and emptied on a regular basis and all dumpsters will have lids and placed in roofed enclosures.*
- *Military honors salutes will be conducted at committal service shelters or the designated assembly area only, and be conducted in a manner that directs firing (i.e., rifles or other small arms only) away from the CLT colony. No artillery or explosives salutes will be permitted.*
- *The volume of carillon output would be limited to ensure that use does not increase ambient noise levels at the CLT colony by more than 10%.*
- *During CLT breeding season, memorial events, such as those held on Memorial Day, will be conducted at designated assembly areas or committal services shelters. Events will be organized, staged, and conducted to direct noises away from the CLT colony. The use of amplifiers or public address systems will be permitted only to the extent that they do not increase ambient noise levels at the site, as measured at the north end of the CLT colony.*
- *All construction vehicles and equipment for construction activities will use designated site access points and remain on designated construction routes.*
- *Stockpiling of materials that may provide additional shelter for potential CLT predators at the construction site will be kept to a minimum and inspected on a regular basis by the biological monitor.*
- *During the CLT breeding season, no materials or equipment will be brought on site during evening or nighttime hours (i.e., dusk to dawn).*
- *Pile driving and pavement demolition activities requiring impact tools are prohibited during the CLT breeding season. The use of other types of construction equipment that would not increase the ambient noise level at the site, as measured from the north end of the CLT colony, are permitted during the CLT breeding season.*
- *The tops of buildings under construction, including on-site trailers, will be inspected for avian predators once each week from April 1 to August 15.*

The 2012 USFWS BO includes a complete and detailed list of the avoidance and minimization measures that VA will implement to minimize potential impacts to the CLT, see Appendix B (Biological Resources Supporting Information).

The off-site utility/road corridor alignments is proposed to follow the existing roadways, which have been used and in operation for decades in areas that contain no habitat for listed species and are well removed from any sensitive species habitat and would not have a significant effect on the CLT.

Western Snowy Plover

Current evidence suggests that western snowy plover visits the surrounding area sporadically as a foraging migrant. As long as the species retains this status, direct effects on the species are likely to be minimal. The increased presence of humans and equipment during construction would increase the likelihood of disturbances (e.g., noise, light) to foraging and resting birds. These impacts would be intermittent, and are unlikely to affect the

use of the site by snowy plover. Potential indirect effects of the project action on western snowy plover are generally shared and similar to those identified for CLT, albeit on a smaller scale, as this species is currently only sporadically present as a migrant. Potential indirect effects would arise from increased human activity near foraging and potential nesting areas (CLT colony) and the daily use of new structures in the vicinity of these areas. Should the western snowy plover reestablish itself as a nesting species in the action area, effects on the species are likely to be identical to those identified for the CLT and thus the proposed avoidance and minimization measures (i.e., **Mitigation Measure BIO-2**) for the CLT are also adequately protective. Based on current habitat use by the snowy plover, the effects of Alternative 1 would be minimal. Therefore, there would be no significant adverse impact on the western snowy plover resulting from construction.

For additional information on the western snowy plover, potential impacts, and proposed avoidance and mitigation measures see Appendix B (Biological Resource Supporting Information).

Common Wildlife and Special-Status Species

Effects under Alternative 2 would be similar to those described under Alternative 1. Therefore, no significant construction-related impact to common wildlife would occur.

Habitat Linkages and Corridors

Effects under Alternative 2 would be similar to those described under Alternative 1. Therefore, no significant construction-related impact would occur to habitat linkages and corridors.

Operation

Vegetation and Wildlife Habitat

There would be no significant direct adverse impacts to existing vegetation and wildlife habitat areas from the operation of Alternative 2. The majority of all operational activities would be limited to the VA Development Area, with the exception of the CLT conservation and management activities, grounds maintenance activities, and limited use of the existing bunkers by VA. Operations will also not have a direct effect on CLT nesting or foraging habitat. Operational activities will occur year round but are removed from foraging and nesting habitats at a sufficient distance to avoid direct effects to the CLT.

There is the potential for indirect adverse effects to the CLT colony from operational activities including effects to habitat and foraging, increased predation, increased human activity, noise, and lighting. However, to minimize and avoid adverse effects on the CLT colony, VA will implement avoidance and minimization measures (i.e., **Mitigation Measure BIO-2**) to control noise and other potential effects that would be expected during operation. These measures would also be expected to help minimize and avoid adverse effects on other habitat areas. For a more detailed discussion of potential effects to the CLT colony see section “Federal Listed and Threatened Species” below. Given these conditions, operational activities would not result in a significant adverse indirect impact to the CLT colony and other vegetated and wildlife habitats.

Off-site Utility/Road Corridor

Alternative 2 would have no operational impact to biological resources within the off-site utility/road corridor.

Adjacent Marine Environment

Operational activities would have no impact on the adjacent marine environment or essential fish habitat.

Federally Listed Threatened and Endangered Species

Federally Listed Plant Species

The VA Transfer Parcel does not contain any designated or proposed critical habitat or Federally listed plant species. Therefore, Alternative 2 would have no construction-related impact to Federally listed or designated or proposed plant species and habitat.

Federally Listed Animal Species

As identified above, effects under Alternative 2 would be similar to those described under Alternative 1. Potential effects to the California clapper rail and salt marsh harvest mouse, no significant impact, are identical to Alternative 1 and are not described in detail below. In addition, Alternative 2 would have no operational impact to Federally designated or proposed habitat.

The Navy and VA have determined that the effects of Alternative 2 (Preferred Alternative) “may affect, and is likely to adversely affect” the CLT and “may effect, but is not likely to adversely affect” the western snowy plover. As identified above in section “Assessment Methodology,” the Navy and VA coordinated with and consulted with the USFWS pursuant to Section 7(a)(2) of the ESA, as amended, on this determination. The Navy and VA received concurrence from USFWS, as documented in the USFWS BO, dated August 29, 2012, on the determination that the “proposed project is likely to adversely affect the least tern” and “that the proposed project may affect, but is not likely to adversely affect the snowy plover.” The USFWS BO states that the “proposed project will increase predation pressure, increase the perception of predation, and reduce the quantity and quality of foraging habitat, adversely affecting all life stages of the least tern at NAS Alameda, thereby resulting in take of the least tern in the form of harm, through habitat modification and disruptions in breeding success, and harassment.” The USFWS BO concludes, “that this level of anticipated take is not likely to result in jeopardy to the least tern” (USFWS 2012).

Appendix B includes copies of the consultation letters. A description of the potential effects to the CLT and western snowy plover and a summary of the avoidance and minimization measures that VA will implement to reduce adverse impacts to the CLT and western snowy plover is provided below.

California Least Tern

Alternative 2, with the implementation of specific avoidance and minimization efforts, would not result in a significant adverse impact to the CLT from operational activities. All operational activities would take place within the VA Development Area, approximately 1,400 to 1,800 feet from the CLT colony. The remaining VA Transfer Parcel (approximately 511 acres), including the CLT colony would be left undeveloped open space. No

regular operational activities, except CLT conservation and management, grounds maintenance, and the use of the existing bunkers, would occur outside the VA Development Area and would not result in the modification or direct disturbance of the CLT colony or the habitat immediately surrounding it. No significant direct effects to the CLT from operational activities are expected. There is the potential for indirect adverse effects from operational activities including sources of noise (e.g., traffic and occupation and use of proposed facilities) and increased human presence. In addition, occupation and activities within the VA Development Area would have the potential to have an effect on the CLT, including predation, perceived predation and human disturbance, and reduce the ability to conduct effective predator management at the site. To reduce the adverse effects as described above, to the CLT to less than significant, VA will implement **Mitigation Measure BIO-2**. With implementation there would be no significant impact to the CLT from operation.

Western Snowy Plover

Alternative 1 would not result in a significant adverse impact to the western snowy plover from operational activities. As identified, current evidence suggests that western snowy plover visits the surrounding area sporadically as a foraging migrant. As long as the species retains this status, direct effects on the species are likely to be minimal. The increased presence of humans and other operational activities would increase the likelihood of disturbances (e.g., noise, light, etc.) to foraging and resting birds. These impacts would be intermittent, and are unlikely to affect the use of the site by snowy plover. Potential indirect effects of the project action on western snowy plover are generally shared and similar to those identified for CLT, albeit on a smaller scale as this species is currently only sporadically present as a migrant. Potential indirect effects would arise from increased human activity and the daily use of new structures in the vicinity. Should the western snowy plover reestablish itself as a nesting species in the action area, effects on the species are likely to be identical to those identified for the CLT and thus the proposed conservation and avoidance measures for the CLT are also adequately protective. Based on current habitat use by the snowy plover, the effects of Alternative 2 would be minimal. Therefore, there would be no significant adverse impact on the western snowy plover resulting from operation.

For additional information on the western snowy plover, potential impacts, and proposed avoidance and mitigation measures see Appendix B (Biological Resource Supporting Information).

Common Wildlife and Special-Status Species

Effects under Alternative 2 would be similar to those described under Alternative 1. Therefore, no significant operational impact would occur to common wildlife.

Habitat Linkages and Corridors

Effects under Alternative 2 would be similar to those described under Alternative 1. Therefore, no significant operational impact would occur to habitat linkages and corridors.

Alternative 2 – Biological Resources Environmental Consequences Summary

As discussed above, the effects of construction and operational activities under Alternative 2 would be similar to those described under Alternative 1, except that the VA Transfer Parcel would be located farther north.

Alternative 2 would result in the modification or loss of some existing vegetation and wildlife habitat area in the VA Development Area which is primarily comprised of marginal habitat (i.e., ruderal-disturbed and nonnative annual grassland). VA will implement Mitigation Measure BIO-1 to minimize and avoid adverse effects to northern coastal salt marsh and seasonal wetlands located within the VA Development Area and thereby reduce impacts to less than significant.

USFWS issued a BO dated August 29, 2012 concurring with the Navy and VA's determination that construction and operational activities under Alternative 2 "may affect, and is likely to adversely affect" the CLT and "may effect, but is not likely to adversely affect" the western snowy plover. The BO prescribes avoidance and minimization measures and requirements for the long-term maintenance, management, and monitoring of biological resources. VA will implement Mitigation Measure BIO-2 to minimize and avoid adverse effects to the CLT and western snowy plover.

Accordingly, with implementation of Mitigation Measures BIO-1 and BIO-2, Alternative 2 would not significantly impact biological resources.

No Action Alternative

Construction

Because the proposed VA facilities would not be constructed under this alternative, no construction-related biological effects would occur. There would be no impact.

Operation

Under the No Action Alternative, there would be no operational biological resources effects. There would be no impact.

3.1.4 References

- AECOM. 2008. *Draft Programmatic Biological Resources Report for the Former NAS Alameda, California*. Prepared for Department of Veterans Affairs and Department of the Navy.
- . 2011. *Biological Assessment for The Department of the Navy's Disposal of 549 Acres and the Department of Veterans Affairs (VA) Construction and Operation of an Outpatient Clinic and National Cemetery at the Former Naval Air Station (NAS) Alameda*. Prepared for Department of Veterans Affairs and Department of the Navy.
- . 2012. *Wetland Delineation and Preliminary Jurisdictional Determination Navy to VA Transfer & VA Outpatient Clinic and National Cemetery Project at the Former Naval Air Station Alameda*.
- Bias, M.A. and M.L. Morrison (Bias and Morrison). 1999. *Movements and Home Range of the Salt Marsh Harvest Mice*. *Southwestern Naturalist* 44(3):348-353.
- Holland, D. C. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game, The Resources Agency.

- H.T. Harvey & Associates (Harvey). 2009. *Salt Marsh Harvest Mouse Survey at the Former Naval Air Station, Alameda*. Prepared for the Department of the Navy, BRAC PMO West. November, 2009.
- U.S. Fish and Wildlife Service (USFWS). 2009. *Federal Register: Endangered and Threatened Wildlife and Plants; Removal of the Brown Pelican (Pelicanus occidentalis) from the Federal List of Endangered and Threatened Wildlife; Final Rule*. FR Doc. E9-27402. Part III. 50 CFR. Part 17. Vol. 74. No. 220: pp. 59443-59472. November 17, 2009. Available: <<http://edocket.access.gpo.gov/2009/pdf/E9-27402.pdf>>.
- . 2012 (August 29). *Final Biological Opinion on the Proposed Naval Air Station Alameda Disposal and Reuse Project in the City of Alameda, Alameda County, California*. (USFWS ID #: 81420-2009-F-0952-4.)
- U.S. Department of the Navy (Navy). 1995. *Salt Marsh Harvest Mouse Survey Report*. Prepared for Engineering Field Activity West, San Bruno, California. Prepared by PRC Environmental Management, Inc. October 4, 1995.
- . 1997. *Biological Assessment for Disposal and Reuse of Naval Air Station Alameda and Fleet and Industrial Supply Center, Alameda Facility and Annex Alameda, California*.

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