

APPENDIX A
POTENTIAL OCCURRENCE OF SPECIAL STATUS SPECIES IN PROJECT STUDY
AREA ON THE PRESIDIO

Common Name <i>Scientific Name</i>	Listing Status USFWS/CDFG/CNPS	Habitat Requirements	Potential Species Occurrence In Project Study Area
FEDERAL AND STATE LISTED SPECIES			
ANIMALS			
<i>Invertebrates</i>			
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	FE/--	Grasslands and coastal scrub with larval food plants (<i>Lupinus albifrons</i> , <i>L. variicolor</i> and <i>L. formosus</i>)	Primarily known from San Mateo County, but occurs at Twin Peaks in San Francisco, and at the north end of Golden Gate Bridge in Marin County. Not detected in past 1994 surveys (Jones and Stokes 1997).
<i>Fish</i>			
Steelhead, Central California Coast ESU <i>Oncorhynchus mykiss</i>	FT/--	Drainages of San Francisco and San Pablo bays, central Calif. Coastal rivers	Migrating individuals may occasionally move through bay waters in the vicinity of the Presidio.
Central Valley chinook salmon-spring-run & Proposed Critical Habitat <i>Oncorhynchus tshawytscha</i>	FT/CT	Central and northern California coastal rivers and streams	The Presidio outside of the designated ESU range, but migrating individuals may occasionally move through Bay waters in the vicinity of the Presidio.
Chinook Salmon, Winter-run & Critical habitat <i>Oncorhynchus tshawytscha</i>	FE/CE	Bay waters	Presidio outside of designated ESU range, but migrating individuals may occasionally move through bay waters in the vicinity of the Presidio.
Central Valley Chinook Salmon, fall/late fall run <i>Oncorhynchus tshawytscha</i>	FC/CSC	Spawns in the Sacramento and San Joaquin Rivers and their tributaries	Presidio outside of designated ESU range, but migrating individuals may occasionally move through Bay waters in the vicinity of the Presidio.
<i>Amphibians</i>			
California tiger salamander <i>Ambystoma californiense</i>	FC/CSC	Wintering sites occur in grasslands occupied by burrowing mammals; breed in ponds and vernal pools	Species has not been identified from the project area. No known occurrences in Presidio (Goals Project 2000).
California red-legged frog <i>Rana aurora draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams	Historically known to occur at Mountain Lake (CDFG 2001); Not detected during 1994 surveys (Jones and Stokes 1997).
<i>Birds</i>			
Marbled murrelet <i>Brachyramphus marmoratus</i>	FT/CE	Nests in dense, old growth forests along coast	Uncommon winter transient (Jones and Stokes 1997).
Western snowy plover (nesting colony) <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Sandy beaches on marine and estuarine shores - requires sandy, gravely, or friable soils for nesting	Uncommon winter visitor to coastal sandy areas (Jones and Stokes 1997).

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Little willow flycatcher <i>Empidonax traillii brewsteri</i>	FSC/CE	Nests and forages in dense riparian cover	No suitable habitat. Willow riparian not extensive enough.
Willow flycatcher <i>Empidonax traillii extimus</i> (nesting)	--/CE	Large willow riparian forest along rivers and streams	Uncommon spring and fall migrant at Lobos Creek and Mountain Lake (Jones and Stokes 1997).
American peregrine falcon <i>Falco peregrinus anatum</i>	FD/CE	Nests in cliffs and outcrops usually adjacent to lakes	Uncommon nonbreeding resident in Presidio; forages throughout Presidio.
California black rail <i>Laterallus jamaicensis coturniculus</i>	FSC/CT	Nests and forages in tidal emergent wetland with pickleweed	No suitable habitat present.
Brown pelican <i>Pelecanus occidentalis californicus</i> (nesting colony)	FE/CE	Forages in open water – roosting in flatlands such as berms and islands	Regular visitor in shore areas of Presidio, especially on ocean side. Do not breed in S.F. Bay (Goals Project 2000).
California least tern <i>Sterna antillarum browni</i> (nesting colony)	FE/CE	Nests along the coast from San Francisco Bay south to northern Baja California - colonial breeder on bare or sparsely vegetated flat substrates including sand beaches, alkali flats, land fills, or paved areas	Rare nonbreeding fall transient. Nests across the bay at the Alameda Naval Air Station. Species not known to breed on the S.F Peninsula (Goals Project 2000).
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Nests and forages in emergent wetland with pickleweed, cordgrass, and bulrush	No suitable habitat present.
Mammals			
Steller (northern) sea lion <i>Eumetopias jubatus</i>	FT/--	Pacific Coast south to Santa Rosa Island, CA.	Migrating individuals may occasionally move through Pacific Ocean outside of the Presidio. Unlikely to be found at any time of year in the Presidio.
PLANTS			
Presidio manzanita <i>Arctostaphylos hookeri</i> ssp. <i>ravenii</i>	FE/CE/1B	Chaparral, coastal prairie and coastal scrub; rocky serpentine slopes	Former San Francisco area endemic; limited in wild to one plant and clones on serpentine bluff above Baker's beach.
Presidio clarkia <i>Clarkia franciscana</i>	FE/CE/1B	Serpentine outcrops in coastal scrub, serpentine chaparral or grassland	Known to occur on serpentine soils in the Presidio. Not detected in Presidio during past Presidio surveys (NPS 1999c).
Marin dwarf flax <i>Hesperolinon congestum</i>	FT/CT/1B	Chaparral and valley/foothill grassland; serpentinite soils	Known to occur in dry, serpentine scrub and grassland slopes in the Presidio (NPS 1999c).

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San Francisco lessingia <i>Lessingia germanorum</i>	FE/CE/1B	Open sandy soils of remnant dunes in coastal scrub	Known to occur on open sandy soils and is only known from San Francisco and San Mateo counties (NPS 1999c). Population introduced by NPS is roughly 300 feet from the project work area.
California seablite <i>Suaeda californica</i>	FE/--/1B	Margins of coastal saltmarshes.	Recently reintroduced to Crissy Field marsh by NPS; population introduced by NPS is roughly 300 feet from the project work area.

FEDERAL OR STATE SPECIES OF SPECIAL CONCERN

ANIMALS			
<i>Invertebrates</i>			
Globose dune beetle <i>Coelus globulus</i>	FSC/--	Northern foredune, coastal dune scrub with herbaceous plants in sandy soils	Potential habitat at Crissy field in Presidio. Not detected in 1994 surveys (Jones and Stokes 1997).
Tree lupine moth <i>Grapholita edwardsiana</i>	FSC/--	Coastal sand dunes typically associated with its larval host plant <i>Lupinus arboreus</i> (yellow bush lupine)	Common throughout Presidio where host plant available; observed during 1994 surveys (Jones and Stokes 1997). Host plant observed in Presidio.
San Francisco fork-tailed damselfly <i>Ischnura gemina</i>	FSC/--	Wetlands with emergent vegetation	Potential habitat at Mountain Lake and Lobos Creek in Presidio outside Presidio. Observed near Fort Point.
Bumblebee scarab <i>Lichnanthe ursina</i>	FSC/--	Open coastal sand dunes	Not detected during 1994 survey, most specimens collected in San Francisco early this century (Jones and Stokes 1997).
<i>Amphibians</i>			
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Fast-moving streams and rivers in chaparral, forests, and woodlands	Not detected during 1994 amphibian surveys (Jones and Stokes 1997). No suitable habitat.
<i>Reptiles</i>			
Silvery legless lizard <i>Anniella pulchra pulchra</i>	FSC/CSC	Areas with sandy or loose loamy soils under open vegetation near beaches, chaparral, or pine-oak woodland	Extirpated from Presidio (Jones and Stokes 1997). Presidio does not provide suitable habitat for this species.
Western pond turtle <i>Clemmys marmorata</i>	FSC/CSC	Lakes, ponds, reservoirs, and slow-moving streams and rivers, primarily in foothills and lowlands	Historical occurrences at Mountain Lake but not detected during 1994 surveys (Jones and Stokes 1997). No upland habitat suitable for this species occurs on the Presidio project area.

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California horned lizard <i>Phrynosoma coronatum frontale</i>	FSC/CSC	Sandy open areas in riparian woodland, grassland, coastal scrub, mixed chaparral, and oak woodland	No known occurrences on Presidio and not identified in recent focused surveys (Jones and Stokes 1997).
Birds			
Tricolored blackbird <i>Agelaius tricolor</i>	FSC/CSC	Nests in freshwater marshes with dense stands of cattails or bulrushes, occasionally in willows, thistles, mustard, blackberry brambles, and dense shrubs and grains	Suitable habitat too fragmented. Not detected during past Presidio surveys (Jones and Stokes 1996; Jones and Stokes 1997).
Ferruginous hawk <i>Buteo regalis</i>	FSC/CSC	Forages in grassland, agricultural lands, and pastures (wintering only)	Uncommon seasonal migrant.
California yellow warbler <i>Dendroica petechia brewsteri</i>	--/CSC	Nests in riparian areas dominated by willows, cottonwoods, sycamores, alders, or mature chaparral; may use urban areas near waterways	Uncommon seasonal migrant; not known to breed at Presidio (Jones and Stokes 1997). Slight possibility of occurrence in arroyo willow areas in Presidio. Low nesting potential.
Red-tailed hawk <i>Buteo jamaicensis</i>	--/--	Open stands of deciduous and coniferous forests; frequents croplands and pastures	Observed; potentially nests in Historic Forest.
Red-shouldered hawk <i>Buteo lineatus</i>	--/--	Dense riparian woodland, hardwood-conifer habitats adjacent to swamps, marshes, and wet meadows	Observed; potentially nests in Historic Forest.
Vaux's swift <i>Chaetura vauxi</i>	--/CSC	Nests in hollow, burned-out tree trunks in large conifers	Uncommon seasonal migrant
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC/CSC	Nests in fresh and saltwater marshes, needs thick continuous cover down to water surface for foraging	Uncommon resident and possible breeder at Mountain Lake (Jones and Stokes 1997) outside of Presidio.
Mammals			
Pallid bat <i>Antrozous pallidus</i>	--/CSC	Day roosts are mainly in caves, crevices and mines; also found in buildings and under bark. Forages in open lowland areas	Suitable roosting sites are absent at the Presidio; thus species occurrence is unlikely (Jones and Stokes 1997).
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Needs rock crevices, grassland, coastal scrub; may use urban areas	Suitable roosting sites are absent at the Presidio; thus species occurrence is unlikely (Jones and Stokes 1997).
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC/--	Roosts in caves, buildings, mines and crevices, sometimes bridges and bark	The Presidio is located well north of the geographical range for this species.

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Long-eared myotis <i>Myotis evotis</i>	FSC/--	Roosts in buildings, crevices, under bark, snags, and in forests. Caves are the primary night roost	Suitable roosting sites are absent at the Presidio; thus species occurrence is unlikely (Jones and Stokes 1997).
Fringed myotis <i>Myotis thysan sodes</i>	FSC/--	Roosts in caves, old buildings and under bark	Suitable roosting sites are absent at the Presidio; thus species occurrence is unlikely (Jones and Stokes 1997).
Long-legged myotis <i>Myotis volans</i>	FSC/--	Roosts in rock crevices, buildings, tree bark, snags, mines and caves. Trees are perhaps the most important daytime roosts for this species.	Suitable roosting sites are absent at the Presidio; thus species occurrence is unlikely (Jones and Stokes 1997).
Yuma myotis <i>Myotis yumanensis</i>	FSC/CSC	Roosts in caves, old buildings and under bark. Forms maternity colony in the spring.	Observed, though uncommonly, during past survey. Suitable roosting sites are absent at the Presidio; thus other than incidental species occurrence is unlikely (Jones and Stokes 1997).
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC/CSC	Forests with moderate canopy cover and brushy understorey	Not detected during past Presidio surveys (Jones and Stokes 1997).
Townsend's big-eared bat <i>Plecotus townsendii</i>	FSC/CSC	Roosts in caves, mines, buildings or other human-made structures for roosting. Forages in open lowland areas	Suitable roosting sites are absent at the Presidio; thus species occurrence is unlikely (Jones and Stokes 1997).
Salt marsh vagrant shrew <i>Sorex vagrans halicoetes</i>	FSC/CSC	Inhabits tidal salt marshes dense with pickleweed around south San Francisco Bay	Collected in 1940 probably located between Fort Point and Crissy Field (Jones and Stokes 1997). No suitable habitat in Presidio.
PLANTS			
Franciscan manzanita <i>Arctostaphylos hookeri</i> ssp. <i>franciscana</i>	FSC/--/1A	Serpentine outcrops in chaparral and serpentinite coastal scrub.	Former San Francisco area endemic; limited currently to cultivation. Not detected in Presidio during past Presidio surveys (NPS 1999c).
San Francisco spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	FSC/--/1B	Sandy terraces and slopes of coastal bluff scrub, coastal dunes, coastal prairie and coastal scrub	A small area of marginal coastal scrub habitat is found in the Presidio. All Presidio records are from the southern portion of the park. Occurs on Lobos Creek dunes.
San Francisco wallflower <i>Erysimum franciscanum</i>	FSC/--/4	Northern foredune, northern coastal scrub, northern coastal bluff scrub, central dune scrub	Occurs on coastal bluffs (NPS 1999c).
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	FSC/--/1B	Coastal bluff scrub, coastal scrub, valley and foothill grassland; slopes with sandy or serpentinite soils	Occurs on coastal bluffs (NPS 1999c).

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<i>San Francisco campion</i> Silene verecunda ssp. verecunda	FSC/--/1B	Coastal habitats (scrub, prairie, bluff scrub), grassland and chaparral; sandy to mudstone or shale soils	Occurs in coastal dune scrub. Suitable habitat at Crissy field in Presidio.
<i>San Francisco owl's clover</i> <i>Triphysaria floribunda</i>	FSC/--/1B	Coastal prairie and scrub, valley and foothill grassland; often on serpentinite soils	Found in Fort Scott area in 2001 (Chasse, 2001).

SPECIES ON OTHER LISTS

ANIMALS			
Monarch butterfly <i>Danaus plexippus</i> (winter sites)	--/*	Eucalyptus groves (winter sites)	Eucalyptus groves north of Kobbe Drive.
Mydas fly <i>Mydas clavatus</i>	Considered locally rare by GGNRA	Sand dunes	Known to occur above Baker Beach and near the east end of Lobos Creek (Jones and Stokes 1997). Habitat occurs outside the project study area.
PLANTS			
Coast rock cress <i>Arabis blepharophylla</i>	FC3c/--/4	Broadleafed upland forests, coastal prairie, coastal scrub; often in rocky places	Observed during 2000 past surveys in Presidio on coastal bluffs (NPS 1999c).
Franciscan thistle <i>Cirsium andrewsii</i>	--/--/1B	Coastal bluff scrub, serpentine habitats in moist sites	Observed in Presidio in 1999 on coastal bluffs (NPS 1999c).
Dune gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	--/--/1B	Coastal sand dunes and openings of coastal dune scrub	No documented occurrence Presidio (Jones and Stokes 1997, NPS 1999c). Suitable habitat potentially at Crissy Field.

Status codes:

Federal Categories (U.S. Fish and Wildlife Service)

FE = Listed as Endangered by the Federal Government
 FT = Listed as Threatened by the Federal Government
 FSC = Federal Species of Concern
 FC3c = Too widespread and/or not threatened
 FD = Delisted. Status monitored for five years.

State Categories (California Department of Fish and Game)

CE = Listed as Endangered by the State of California
 CT = Listed as Threatened by the State of California
 CR = Listed as Rare by the State of California
 CSC = California Species of Special Concern
 * = California Natural Diversity Data Base Special Animals List

California Native Plant Society (CNPS)

List 1A = Plants presumed extinct in California
 List 1B = Plants rare, threatened, or endangered in California and elsewhere
 List 2 = Plants rare, threatened, or endangered in California but more common
 List 3 = Plants about which more information is needed
 List 4 = Plants of limited distribution

-- No listing status

SOURCES: CDFG 2001; CNPS 1999; NPS 1999, 2000; Jones and Stokes Associates 1997; Munz and Keck 1970; Goals Project 2000.