



LETTER OF BIOLOGICAL FINDINGS

November 09, 2009

Suisun City Redevelopment Agency
Attn: Jason Garben
701 Civic Center Boulevard
Suisun City, CA 94585

**Re: Biological Survey Update for the Suisun City Mixed Use Project, Suisun City,
Solano County, CA (GC# 2009-227)**

Dear Mr. Garben:

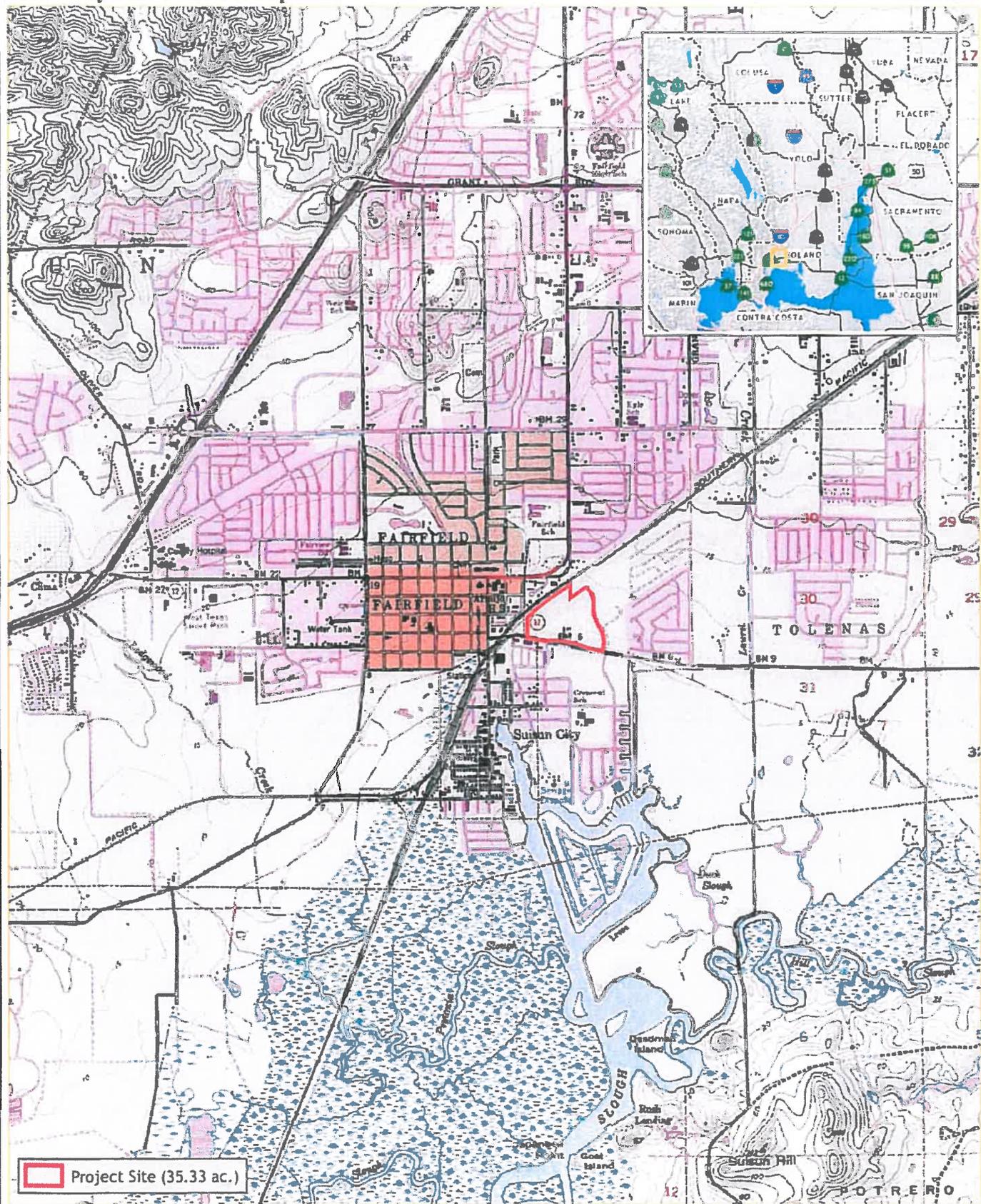
Gallaway Consulting (GC) conducted a biological survey update within the Suisun City Mixed Use Project biological survey area (BSA) located in Suisun City, Solano County, CA (**Figure 1**). The approximately 30-acre BSA is surrounded by Marina Blvd to the east, Main Street and Highway 12 to the south, and the Southern Pacific Railroad to the northwest (**Figure 1**). The survey was conducted on October 28, 2009 by botanist Elena Gregg in order to determine if the potential for sensitive biological resources within the survey area has changed since the Biological Resources Assessment was prepared by Gallaway Consulting, Inc. in 2006.

Biological Setting

The BSA is located within Section 25, T5N, R2W (M) of the Fairfield South 7.5-minute quadrangle (**Figure 1**). The approximately 30-acre BSA is characterized by annual grassland associated with the San Francisco Bay Area. The site showed evidence of recent tilling and mowing as well as past grading and fill activities. The construction of a paved pedestrian path along the north side of the irrigation ditch located along the southern boundary of the site was in progress and a small portion of the Property was being used as a staging area for equipment. Commercial and residential developments surround the BSA in all cardinal directions. Dirt access roads occur in multiple areas throughout the site and a dilapidated concrete building pad and water storage tank occur within southern portion of the BSA. Additionally, multiple seasonal wetlands occur within the BSA. The BSA ranges in elevation from approximately 5-10 feet above sea level with relatively flat topography.

Suisin City Mixed Use Development

Location



Project Site (35.33 ac.)

↑ Within Suisin Land Grant, in proximity of T5N, R2W Solano County, CA, on Fairfield North USGS 7.5' Quad. Map shows Fairfield North & Fairfield South USGS 7.5' Quads. Map Date: November 9, 2009

Miles
0 0.25 0.5



Figure 1

Methodology

Updated lists of special-status species that potentially occur in the vicinity of the survey area were obtained from the U.S. Fish and Wildlife Service (USFWS) (**Attachment A**), the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB) (**Attachment B**), and the California Native Plant Society (CNPS) (**Attachment C**). Prior to and following the field survey, the lists were evaluated, and the potential for these special-status species to occur in the BSA was determined (**Table 1**).

The survey was conducted on October 28, 2009 by botanist Elena Gregg to determine the extent of potential biological constraints to development that are present within the BSA. The entire BSA was traversed on foot and the site was assessed to determine if suitable habitats for special-status wildlife or plant species were present (**Table 1**).

Results

Due to the October field survey date, a protocol-level survey for 15 special-status plant species was conducted within the BSA. These plants include the big tarplant, brittlescale, Carquinez goldenbush, Congdon's tarplant, heartscale, Mason's liaeopsis, Mt. Diablo buckwheat, Napa bluecurls, pappose tarplant, San Joaquin spearscale, soft bird's-beak, streamside daisy, Suisun marsh aster, vernal pool smallscale, and wooly-headed lessingia. During the protocol-level survey, one CNPS list 1B rare plant species was observed, the pappose tarplant. The BSA was also determined to provide suitable habitat for four special-status plant species including the bearded popcorn-flower, Contra Costa goldfields, Legenere, and saline clover (**Table 1**). Potential habitat for these four plant species occurs within the seasonally wet features within the BSA. Additionally, there are past CNDDDB occurrences of Legenere and Contra Costa goldfields within 1 mile of the BSA (**Figure 2**) and past CNDDDB occurrences of the saline clover occur within 5 miles of the BSA (**Figure 3**). Though past CNDDDB occurrences of the Mt. Diablo buckwheat and Mason's liaeopsis occur in close proximity to the BSA, these species were not observed during the protocol-level survey.

Four special-status bird species have potential to forage within the BSA including the northern harrier, Suisun song sparrow, Swainson's hawk, and white-tailed kite. Due to the lack of large trees, only the Suisun song sparrow has potential to nest within the BSA. Mitigation for the loss of Swainson's hawk foraging habitat is required by the CDFG if known Swainson's hawk nests occur within 10 miles of the disturbed land. As depicted in **Figure 4**, 14 known Swainson's hawk nests occur within 10 miles of the BSA. The BSA also has a high potential for passerines and other migratory birds protected by the Migratory Bird Treaty Act (MBTA) (16 USC §703) and the California Fish and Game Code (CFGC) §3503 to nest and/or utilize the BSA.

Table 1. List of special-status species gathered from USFWS, CNDDDB and CNPS databases with potential for occurrence within the Suisun City Property BSA, Solano County, CA.

Common Name (<i>Scientific name</i>)	Status Fed/State/ CNPS	Habitat	Potential for Occurrence
SENSITIVE NATURAL COMMUNITIES			
Coastal Brackish Marsh	_/SNC/_	Located at the interior edges of coastal bays and estuaries or in coastal lagoons. Similar to coastal salt marshes but brackish due to freshwater inputs. Dominated by 2 meter tall perennial, emergent, herbaceous monocots	<u>None.</u> Not present within the BSA
Northern Claypan Vernal Pool	_/SNC/_	Seasonally flooded depressions on impermeable soils with low microrelief and overall cover.	<u>None.</u> Not present within the BSA
Northern Coastal Salt Marsh	_/SNC/_	Occurs on the deep alluvial soils the floodplain terraces in association with Delta systems near the coast.	<u>None.</u> Not present within the BSA
Serpentine Bunchgrass	_/SNC/_	Dominated by midheight (to 3 feet) tussock-forming grasses. Occurs in fine-textured, serpentinite soils.	<u>None.</u> Not present within the BSA
Valley Needlegrass Grassland	_/SNC/_	Open grassland dominated by tussock-forming <i>Nassella pulchra</i> (2 ft. tall). Usually occurs on fine-textured soils.	<u>None.</u> Not present within the BSA
PLANTS			
Adobe Lily (<i>Fritillaria pluriflora</i>)	_/_/1B	Chaparral, cismontane woodland, valley and foothill grassland. (Feb-Apr)	<u>None.</u> No suitable habitat present within the BSA.
Alkali Milk-vetch (<i>Astragalus tener</i> var. <i>tener</i>)	_/_/1B	Playas, valley and foothill grassland/adobe, clay soils, and alkaline vernal pools. (March-June)	<u>None.</u> No suitable habitat present within the BSA.
Antioch Dunes Evening-primrose (<i>Oenothera deltoidea</i> ssp. <i>howellii</i>)	FE/SE/1B	Inland dunes. (March-Sep)	<u>None.</u> No suitable habitat present within the BSA.
Baker's navarretia (<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>)	_/_/1B	Woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools. (Apr-Jul)	<u>Low.</u> Sub-marginal habitat present within the BSA
Bearded Popcorn-flower (<i>Plagiobothrys hystriculus</i>)	_/_/1B	Mesic valley and foothill grassland and margins of vernal pools and swales. (Apr-May)	<u>Moderate.</u> Potentially suitable habitat present within the BSA.
Big-scale Balsam Root (<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>)	_/_/1B	Cismontane woodlands and chaparral. Valley and Foothill grasslands. Sometimes serpentinite. (Mar-June)	<u>None.</u> No suitable habitat present within the BSA

Common Name (Scientific name)	Status Fed/State/ CNPS	Habitat	Potential for Occurrence
Big Tarplant (<i>Blepharizonia plumosa</i>)	___/___/1B	Valley and foothill grassland. (Jul-Oct)	<u>None</u> . Not observed within the BSA.
Bolander's Water Hemlock (<i>Cicuta maculata</i> var. <i>bolanderi</i>)	___/___/2	Coastal freshwater or brackish marshes and swamps. (Jul-Sep)	<u>None</u> . No suitable habitat present within the BSA.
Brewer's Western Flax (<i>Hesperolinon breweri</i>)	___/___/1B	Chaparral, cismontane woodland, and valley and foothill grassland, often serpentinite. (May-Jul)	<u>None</u> . No suitable habitat present within the BSA.
Brittlescale (<i>Atriplex depressa</i>)	___/___/1B	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pools (alkaline, clay). (May-Oct)	<u>None</u> . Not observed within the BSA.
California Beaked-rush (<i>Rhynchospora californica</i>)	___/___/1B	Bogs and fens, lower montane coniferous forest, meadows and seeps, and marshes and swamps. (May-Jul)	<u>None</u> . No suitable habitat present within the BSA.
Carquinez Goldenbush (<i>Isocoma arguta</i>)	___/___/1B	Alkaline valley and foothill grassland. (Aug-Dec)	<u>None</u> . Not observed within the BSA.
Contra Costa Goldfields (<i>Lasthenia conjugens</i>)	FE/___/1B	Mesic vernal pools, valley and foothill grassland, cismontane woodland, and alkaline playas. (Mar-Jun)	<u>Moderate</u> . Potentially suitable habitat present within the BSA.
Congdon's Tarplant (<i>Centromadia parryi</i> ssp. <i>congdonii</i>)	___/___/1B	Alkaline valley and foothill grassland. (May-Oct/Nov)	<u>None</u> . Not observed within the BSA.
Delta Mudwort (<i>Limosella subulata</i>)	___/___/2	Marshes and swamps. (May-Aug)	<u>None</u> . No suitable habitat present within the BSA.
Delta Tule Pea (<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>)	___/___/1B	Freshwater and brackish marshes and swamps. (May-Jul/Sep)	<u>None</u> . No suitable habitat present within the BSA.
Diablo Helianthella (<i>Helianthella castanea</i>)	___/___/1B	Broadleaf upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley/foothill grassland. (Mar-Jun)	<u>None</u> . No suitable habitat present within the BSA.
Dwarf Downingia (<i>Downingia pusilla</i>)	___/___/2	Valley and foothill grasslands. Vernal pools. (Mar-May)	<u>Low</u> . Sub-marginal habitat present within the BSA.
Greene's Narrow-leaved Daisy (<i>Erigeron greenei</i>)	___/___/1B	Serpentinite or volcanic chaparral. (May-Sep)	<u>None</u> . No suitable habitat present within the BSA.
Heartscale (<i>Atriplex cordulata</i>)	___/___/1B	Chenopod scrub, meadows and seeps, valley and foothill grassland (saline or alkaline). (Apr-Oct)	<u>None</u> . Not observed within the BSA.
Hispid Bird's-beak (<i>Cordylanthus mollis</i> ssp. <i>hispidus</i>)	___/___/1B	Meadows and seeps, playas, and alkaline valley and foothill grassland. (Jun-Sep)	<u>None</u> . Not observed within the BSA.
Holly-leaved Ceanothus (<i>Ceanothus purpureus</i>)	___/___/1B	Chaparral, and volcanic, rocky cismontane woodland (Feb-Jun)	<u>None</u> . No suitable habitat present within the BSA.

Common Name (<i>Scientific name</i>)	Status Fed/State/ CNPS	Habitat	Potential for Occurrence
Keck's Checkerbloom (<i>Sidalcea keckii</i>)	FE/__/1B	Cismontane woodland and serpentinite, clay valley and foothill grassland. (Apr-May)	<u>None</u> . No suitable habitat present within the BSA.
Legenere (<i>Legenere limosa</i>)	__/__/1B	Vernal pools, 1-880 meters. (Apr-Jun)	<u>Moderate</u> . Sub-marginal habitat present within the BSA, but a CNDDDB occurrence is located within 1 mile of the BSA.
Marin Checkerbloom (<i>Sidalcea hickmanii</i> ssp. <i>viridis</i>)	__/__/1B	Serpentinite chaparral. (May-Jun)	<u>None</u> . No suitable habitat present within the BSA.
Mason's Lilaeopsis (<i>Lilaeopsis masonii</i>)	__/SR/1B	Riparian scrub and freshwater or brackish marshes and swamps. (Apr-Nov)	<u>None</u> . Not observed within the BSA.
Mt. Diablo Buckwheat (<i>Eriogonum truncatum</i>)	__/__/1B	Chaparral, coastal scrub, and sandy valley and foothill grassland. (Apr-Sep/Nov)	<u>None</u> . No suitable habitat present within the BSA.
Mt. Diablo Cottonweed (<i>Micropus amphibolus</i>)	__/__/3	Broadleaf upland forest, chaparral, cismontane woodland, and rocky valley and foothill grassland. (Mar-May)	<u>None</u> . No suitable habitat present within the BSA.
Mt. Diablo Fairy-lantern (<i>Calochortus pulchellus</i>)	__/__/1B	Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland. (Apr-Jun)	<u>None</u> . No suitable habitat present within the BSA.
Napa Bluecurls (<i>Trichostema nuyttii</i>)	__/__/1B	Vernal pools, valley and foothill grassland, chaparral, cismontane woodland, and lower montane coniferous forest. (Jun-Oct)	<u>None</u> . No suitable habitat present, and not observed within the BSA.
Napa Checkerbloom (<i>Sidalcea hickmanii</i> ssp. <i>nepensis</i>)	__/__/1B	Upper elevation, rhyolitic chaparral. (Apr-Jun)	<u>None</u> . No suitable habitat present within the BSA.
Napa Western Flax (<i>Hesperolinon serpentinum</i>)	__/__/1B	Serpentinite chaparral. (May-Jul)	<u>None</u> . No suitable habitat present within the BSA.
Narrow-anthered California Brodiaea (<i>Brodiaea californica</i> var. <i>leptandra</i>)	__/__/1B	Broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and volcanic valley and foothill grassland. (May-Jul)	<u>None</u> . No suitable habitat present within the BSA.
Oval-leaved Viburnum (<i>Viburnum ellipticum</i>)	__/__/2	Chaparral, cismontane woodland, lower montane coniferous forest. (May-Jun)	<u>None</u> . No suitable habitat present within the BSA.
Pappose Tarplant (<i>Centromadia parryi</i> ssp. <i>parryi</i>)	__/__/1B	Chaparral, coastal prairie, meadows and seeps, coastal salt marshes and swamps, and alkaline vernal mesic valley and foothill grasslands (May-Nov)	<u>Known</u> . Observed within the BSA.
Recurved larkspur (<i>Delphinium recurvatum</i>)	__/__/1B	Chenopod scrub, cismontane woodland, valley and foothill grassland (alkaline). (Mar-Jun)	<u>Low</u> . Sub-marginal habitat present within the BSA

Common Name (Scientific name)	Status Fed/State/ CNPS	Habitat	Potential for Occurrence
Robust Monardella (<i>Monardella villosa</i> ssp. <i>globosa</i>)	__/__/1B	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland and vernal pools/vernally mesic habitats. (Mar-May)	<u>None</u> . No suitable habitat present within the BSA.
Saline Clover (<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>)	__/__/1B	Marshes and swamps, mesic/alkaline valley and foothill grassland, and vernal pools. (Apr- Jun)	<u>Moderate</u> . Potentially suitable habitat present within the BSA.
San Joaquin Spearscale (<i>Atriplex joaquiniana</i>)	__/__/1B	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland (alkaline). (Apr-Oct)	<u>None</u> . Not observed within the BSA.
San Joaquin Valley Orcutt Grass (<i>Orcuttia inaequalis</i>)	FT/SE/1B	Vernal pools. (Apr-Sep)	<u>None</u> . No suitable habitat present within the BSA.
Showy Rancheria Clover (<i>Trifolium amoenum</i>)	FE/__/1B	Coastal bluff scrub and valley and foothill grassland, sometimes serpentinite. (Apr-Jun)	<u>None</u> . No suitable habitat present within the BSA.
Slender-leaved Pondweed (<i>Potamogeton filiformis</i>)	__/__/2	Marshes and swamps (assorted shallow freshwater). (May-July)	<u>None</u> . No suitable habitat present within the BSA
Soft Bird's-beak (<i>Cordylanthus mollis</i> ssp. <i>mollis</i>)	FE/SR/1B	Coastal salt marshes and swamps. (Jul-Nov)	<u>None</u> . No suitable habitat present within the BSA.
Streamside Daisy (<i>Erigeron biolettii</i>)	__/__/3	Broadleaf upland forest, cismontane woodland, and rocky/mesic North Coast coniferous forest. (Jun-Oct)	<u>None</u> . No suitable habitat present within the BSA.
Suisun Marsh Aster (<i>Symphotrichum lentum</i>)	__/__/1B	Freshwater and brackish marshes and swamps. (May-Nov)	<u>None</u> . No suitable habitat present within the BSA.
Suisun Thistle (<i>Cirsium hydrophilum</i> var. <i>hydrophilum</i>)	FE/__/1B	Salt marshes and swamps. (Jun- Sep)	<u>None</u> . No suitable habitat present within the BSA.
Tiburon Buckwheat (<i>Eriogonum luteolum</i> var. <i>caninum</i>)	__/__/1B	Chaparral, cismontane woodland, coastal prairie, and serpentinite valley and foothill grassland, often sandy to gravelly. (May-Sep)	<u>None</u> . No suitable habitat present within the BSA.
Tiburon Paintbrush (<i>Castilleja affinis</i> ssp. <i>neglecta</i>)	FE/ST/1B	Serpentinite valley and foothill grassland. (Apr-Jun)	<u>None</u> . No suitable habitat present within the BSA.
Vernal Pool Smallscale (<i>Atriplex persistens</i>)	__/__/1B	Vernal pools (alkaline). (Jun-Oct)	<u>None</u> . No suitable habitat present within the BSA.
Western Leatherwood (<i>Dirca occidentalis</i>)	__/__/1B	Broadleaf upland forest, close- cone coniferous forest, chaparral, cismontane woodland, North Coast conifer forest, riparian forest, and mesic riparian woodland. (Jan-Mar/Apr)	<u>None</u> . No suitable habitat present within the BSA.
Wooly-headed Gilia (<i>Gilia capitata</i> ssp. <i>tomentosa</i>)	__/__/1B	Rocky/outcrops in coastal bluff scrub. (May-Jul)	<u>None</u> . No suitable habitat present within the BSA.

Common Name (Scientific name)	Status Fed/State/ CNPS	Habitat	Potential for Occurrence
Woolly-headed Lessingia (<i>Lessingia hololeuca</i>)	___/___/3	Broadleaf upland forest, coastal scrub, lower montane coniferous forest, and clay/serpentine valley and foothill grassland (Jun-Oct).	<u>None</u> . No suitable habitat present within the BSA
INVERTEBRATES			
Callippe Silverspot Butterfly (<i>Speyeria callippe callippe</i>)	FE/___/___	Grassy hills surrounding San Francisco Bay that support the host plant <i>Viola pedunculata</i> .	<u>None</u> . No suitable habitat present within the BSA.
California Freshwater Shrimp (<i>Syncais pacifica</i>)	FE/___/___	Low elevation (less than 116 meters) and low gradient (less than 1%) streams in the Coast Range with structurally diverse banks.	<u>None</u> . No suitable habitat present within the BSA.
Conservancy Fairy Shrimp (<i>Branchinecta conservatio</i>)	FE/___/___	Moderately turbid, deep, cool-water vernal pool	<u>None</u> . No suitable habitat present within the BSA.
Delta Green Ground Beetle (<i>Elaphrus viridis</i>)	FT/___/___	Margins of vernal pools and in bare areas along trails and roadsides. Hide in cracks in the mud and under low-growing vegetation.	<u>Low</u> . Potentially suitable habitat present, but 12 miles from only known occurrence in Solano County.
Valley Elderberry Longhorn Beetle (<i>Desmocerus californicus dimorphus</i>)	FT/___/___	Blue elderberry shrubs usually associated with riparian areas.	<u>None</u> . No suitable habitat present in the survey area
Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	FT/___/___	Vernal pools, swales, and ephemeral freshwater habitat.	<u>None</u> . No suitable habitat present within the BSA.
Vernal Pool Tadpole Shrimp (<i>Lepidurus packardii</i>)	FE/___/___	Vernal pools, swales, and ephemeral freshwater habitat.	<u>None</u> . No suitable habitat present within the BSA.
REPTILES & AMPHIBIANS			
Alameda Whipsnake (<i>Masticophis lateralis euryxanthus</i>)	FT/ST/___	Coast Ranges in scrub habitats and adjacent grassland, oak savanna, and oak-bay woodland.	<u>None</u> . No suitable habitat present within the BSA
California Red-legged Frog (<i>Rana aurora draytonii</i>)	FT/___/___	Inhabits quiet pools of streams, marshes, and occasionally ponds.	<u>None</u> . No suitable habitat present within the BSA.
California Tiger Salamander (<i>Ambystoma californiense</i>)	FT/CSC/___	Vernal pools and seasonal ponds in grassland and oak savannah.	<u>Low</u> . Sub-marginal habitat present within the BSA due to land disturbance.
Foothill Yellow-legged Frog (<i>Rana boylei</i>)	___/CSC/___	Partly-shaded, shallow streams and riffles with cobble-sized substrate for egg-laying.	<u>None</u> . No suitable habitat present within the BSA
Giant Garter Snake (<i>Thamnophis gigas</i>)	FT/ST/___	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	<u>Low</u> . Sub-marginal habitat present within the BSA

Common Name (<i>Scientific name</i>)	Status Fed/State/ CNPS	Habitat	Potential for Occurrence
Northwestern Pond Turtle (<i>Actinemys marmorata marmorata</i>)	_/CSC/_	Associated with permanent ponds, lakes, streams, and irrigation ditches or permanent pools along intermittent streams.	<u>None</u> . No suitable habitat present within the BSA
FISH			
Central Valley Spring-Run Chinook Salmon (<i>Oncorhynchus tshawytscha</i>)	FT/ST/_	Sacramento River and tributaries.	<u>None</u> . No suitable habitat present within the BSA
Central Valley Steelhead (<i>Oncorhynchus mykiss</i>)	FT/_/_	Sacramento and San Joaquin Rivers and their tributaries.	<u>None</u> . No suitable habitat present within the BSA
Central Valley Winter-Run Chinook Salmon (<i>Oncorhynchus tshawytscha</i>)	FE/_/_	Sacramento River and tributaries.	<u>None</u> . No suitable habitat present within the BSA
Delta Smelt (<i>Hypomesus transpacificus</i>)	FT/ST/_	Sacramento-San Joaquin Estuary	<u>None</u> . No suitable habitat present within the BSA
Green Sturgeon (<i>Acipenser medirostris</i>)	FT/CSC/_	Enter freshwaters to spawn. The only recently-documented spawning locations are in the Klamath, Sacramento, and Rogue rivers along the west coast of North America.	<u>None</u> . No suitable habitat present within the BSA
Sacramento Splittail (<i>Pogonichthys macrolepidotus</i>)	_/SC/_	Largely confined to: the San Francisco Bay Delta, Suisun Bay, Suisun Marsh, Napa River, Petaluma River, and other parts of the Sacramento-San Joaquin Estuary.	<u>None</u> . No suitable habitat present within the BSA
MAMMALS			
Big Free-tailed Bat (<i>Nyctinomops macrotis</i>)	_/CSC/_	Rugged, rocky terrain in canyons.	<u>None</u> . No suitable habitat present-typical range is in San Diego County.
Salt-marsh Harvest Mouse (<i>Reithrodontomys raviventris</i>)	FE/SE/_	Saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed marshes are preferred habitat.	<u>None</u> . No suitable habitat present within the BSA.
Suisun Shrew (<i>Sorex ornatus sinuatus</i>)	_/CSC/_	Dense, low lying <i>Salicornia</i> marshes in the San Pablo and Suisun Bays.	<u>None</u> . No suitable habitat present within the BSA.
Western Red Bat (<i>Lasiurus blossevillii</i>)	_/CSC/_	Roosts in forest and broadleaf woodlands from sea level to coniferous forest. Feeds over grasslands, shrublands, open woodlands, and croplands. Occurs from Shasta County to the Mexican border – often in riparian habitats.	<u>None</u> . No suitable habitat present within the BSA.
BIRDS			
Burrowing owl (<i>Athene cunicularia</i>)	_/CSC/_	Nests in burrows in the ground, often in old ground squirrel burrows or badger, within open	<u>Low</u> . Sub-marginal habitat present within the BSA due

Common Name (<i>Scientific name</i>)	Status Fed/State/ CNPS	Habitat	Potential for Occurrence
		dry grassland and desert habitat.	to high level of ground disturbance
California Black Rail (<i>Laterallus jamaicensis coturniculus</i>)	___/ST/___	Yearlong resident of saline, brackish, and fresh emergent wetlands in the San Francisco Bay Area, Sacramento-San Joaquin Delta, coastal Southern California, the Salton Sea and lower Colorado River area.	<u>Low</u> . Sub-marginal habitat present within the BSA.
California Clapper Rail (<i>Rallus longirostris obsoletus</i>)	FE/SE/___	Coastal wetlands and brackish emergent wetlands in San Francisco, Monterey, and Morro Bays.	<u>Low</u> . Sub-marginal habitat present within the BSA.
California Least Tern (<i>Sternula antillarum browni</i>)	FE/SE/___	Shallow estuarine waters and abandoned salt ponds.	<u>None</u> . No suitable habitat present within the BSA.
Northern Harrier (<i>Circus cyaneus</i>)	___/CSC/___	Meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands	<u>None</u> . No suitable nesting habitat, but highly suitable foraging habitat present within the BSA
Northern Spotted Owl (<i>Strix occidentalis caurina</i>)	FT/___/___	Old growth forests and younger forests with remnants of larger trees.	<u>None</u> . No suitable habitat present within the BSA.
Peregrine Falcon (<i>Falco peregrinus anatum</i>)	___/SE/___	Woodland, forest and costal habitats including riparian and wetland areas. Requires bodies of water in open areas with cliffs and canyons nearby.	<u>None</u> . No suitable habitat present within the BSA.
Saltmarsh Common Yellowthroat (<i>Geothlypis trichas sinuosa</i>)	___/CSC/___	Coastal emergent wetlands.	<u>None</u> . No suitable habitat present within the BSA.
San Pablo Song Sparrow (<i>Melospiza melodia samuelis</i>)	___/CSC/___	Riparian, fresh or saline emergent wetlands, and wet meadow habitat.	<u>Low</u> . Sub-marginal habitat present within the BSA.
Short-eared Owl (<i>Asio flammeus</i>)	___/CSC/___	Open areas with few trees including grasslands, prairies, dunes, meadows, irrigated fields, and saline or freshwater emergent wetlands.	<u>Low</u> . Sub-marginal habitat present within the BSA.
Suisun Song Sparrow (<i>Melospiza melodia maxillaris</i>)	___/CSC/___	Emergent wetlands in Solano and Contra Costa Counties.	<u>Moderate</u> . Potentially suitable nesting and foraging habitat present within the BSA.
Swainson's Hawk (<i>Buteo swainsoni</i>)	MBTA/ST/___	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat including grasslands or suitable grain or alfalfa fields, or livestock pastures.	<u>Moderate</u> . Potentially suitable foraging habitat present within the BSA. No suitable nesting habitat.

Common Name (<i>Scientific name</i>)	Status Fed/State/ CNPS	Habitat	Potential for Occurrence
Tri-colored Blackbird (<i>Agelaius tricolor</i>)	_/CSC/_	Nests in dense blackberry, cattail, tules, willow, or wild rose within emergent wetlands throughout the Central valley and foothills surrounding the valley.	<u>Low</u> . Sub-marginal habitat present within the BSA.
White-tailed Kite (<i>Elanus leucurus</i>)	_/FP/_	Uses herbaceous lowlands with variable tree growth and dense population of voles. Substantial groves of dense, broad-leafed deciduous trees used for nesting and roosting.	<u>None</u> . No suitable nesting habitat, but highly suitable foraging habitat present within the BSA..
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	FT/CSC/_	Coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths	<u>Low</u> . Sub-marginal habitat present within the BSA.
Migratory Birds and Raptors	MBTA	Nest and forage in a variety of habitats including hardwood woodlands, coniferous forests, meadows, grasslands and riparian.	<u>Present</u> . Migratory bird species were observed within the BSA

CODE DESIGNATIONS

FE = Federally-listed Endangered

FT = Federally-listed Threatened

FC = Federal Candidate Species

MBTA = Protected by the federal Migratory Bird Treaty Act

Act

SE = State-listed Endangered

ST = State-listed Threatened

SR = State-listed Rare

CSC = CDFG Species of Special Concern

FP = CDFG Fully Protected Species

SNC = CDFG Sensitive Natural Community

CNPS 1B = Rare or Endangered in California or elsewhere

CNPS 2 = Rare or endangered in California, more common elsewhere

CNPS 3 = More information is needed

CNPS 4 = Plants with limited distribution

***Potential for occurrence:** for plants it is considered the potential to occur during the survey period; for birds and bats it is considered the potential to breed, forage, roost, over-winter, or stop-over in the BSA during migration. Any bird or bat species could fly over the BSA, but this is not considered a potential for occurrence. The categories for the potential for occurrence include:

None: The species or natural community is known not to occur, and has no potential to occur in the BSA based on sufficient surveys, the lack of suitable habitat, and/or the BSA is well outside of the known distribution of the species.

Low: Potential habitat in the BSA is sub-marginal and the species is not known to occur in the vicinity of the BSA. Protocol-level surveys are not recommended.

Moderate: Suitable habitat is present in the BSA and the species is known to occur in the vicinity of the BSA.

High: Habitat in the BSA is highly suitable for the species and there are reliable records close to the BSA, but the species was not observed.

Known: Species was detected in the BSA or a recent reliable record exists for the BSA.

No other special-status plant or animal species were determined to have a significant potential to occur within the BSA (**Table 1**). A list of plant and animal species observed within the BSA is provided in **Attachment D**.

Conclusions

One CNPS list 1B plant species, the pappose tarplant, was observed within the BSA during the October field survey. Due to the presence of this plant species within the BSA, avoidance of this plant to the greatest extent possible should be attempted. If avoidance is not possible, consultation with the CDFG will be required to determine adequate mitigation measures for impacts to this species.

Four special-status plant species have potential to occur within the BSA. Therefore, the CEQA lead agency may require surveys for these plant species. Should surveys be conducted, they must be performed by a qualified botanist during the appropriate flowering window for each species per CDFG and CNPS guidelines.

The BSA provides suitable foraging habitat for Swainson's hawks, and known Swainson's hawk nests occur within 10 miles of the BSA. Therefore, mitigation will be required by the CDFG for any loss of foraging habitat within the BSA.

Due to the potential for the Suisun song sparrow and bird species protected under the MBTA, to nest within the BSA, vegetation removal or ground disturbance should be conducted between September 1 and February 28 (i.e. the non-breeding season), or after all nestlings have fledged from active nests. If vegetation removal or ground disturbance occurs during the breeding season (i.e. March 1 to August 31) for bird or raptor species protected by the MBTA and CFGC, then a qualified biologist should conduct a survey to locate any nests of these protected bird species in the BSA and establish a no disturbance buffer zone around the nest.

Please feel free to contact me with any questions.

Sincerely,



Elena Gregg,
Botanist/Arborist

Literature Cited

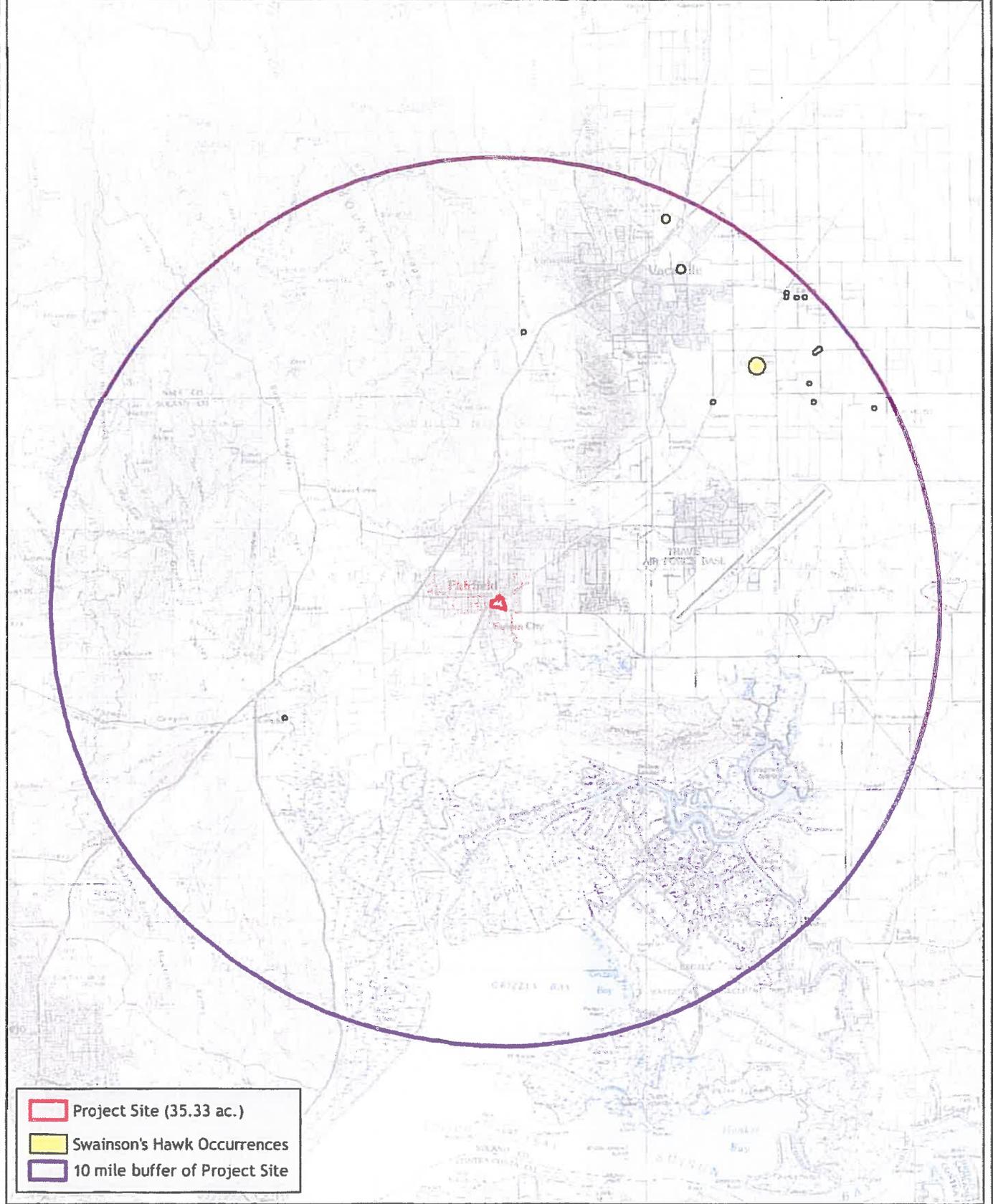
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- Project Site (35.33 ac.)
- Swainson's Hawk Occurrences
- 10 mile buffer of Project Site

↑ SWHA Occurrences derived from CDFG data. (10/06/09)
Project is within Fairfield North 7.5' USGS Quad
Map shows Napa and Lodi 15' USGS Quads
Map Date: November 9, 2009

Miles
0 0.5 1



Figure 4

ATTACHMENT A
USWFS SPECIES LIST

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

**Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 091022033751

Database Last Updated: January 29, 2009

Quad Lists

Listed Species

Invertebrates

Branchinecta conservatio

Conservancy fairy shrimp (E)

Critical habitat, Conservancy fairy shrimp (X)

Branchinecta lynchi

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Elaphrus viridis

Critical habitat, delta green ground beetle (X)

delta green ground beetle (T)

Lepidurus packardii

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

Speyeria callippe callippe

callippe silverspot butterfly (E)

Syncaris pacifica

California freshwater shrimp (E)

Fish

Acipenser medirostris

green sturgeon (T) (NMFS)

Hypomesus transpacificus

Critical habitat, delta smelt (X)

delta smelt (T)

Oncorhynchus mykiss

Central Valley steelhead (T) (NMFS)

Critical habitat, Central California coastal steelhead (X) (NMFS)

Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha

Central Valley spring-run chinook salmon (T) (NMFS)

Critical habitat, winter-run chinook salmon (X) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

Rana aurora draytonii

California red-legged frog (T)

Critical habitat, California red-legged frog (X)

Reptiles

Masticophis lateralis euryxanthus

Alameda whipsnake [=striped racer] (T)

Critical habitat, Alameda whipsnake (X)

Thamnophis gigas

giant garter snake (T)

Birds

Charadrius alexandrinus nivosus

western snowy plover (T)

Pelecanus occidentalis californicus

California brown pelican (E)

Rallus longirostris obsoletus

California clapper rail (E)

Sternula antillarum (=Sterna, =albifrons) browni

California least tern (E)

Strix occidentalis caurina

northern spotted owl (T)

Mammals

Reithrodontomys raviventris

salt marsh harvest mouse (E)

Plants

Castilleja affinis ssp. *neglecta*

Tiburon paintbrush (E)

Cirsium hydrophilum var. *hydrophilum*

Suisun thistle (E)

Cordylanthus mollis ssp. *mollis*

soft bird's-beak (E)

Lasthenia conjugens

Contra Costa goldfields (E)

Critical habitat, Contra Costa goldfields (X)

Oenothera deltoides ssp. *howellii*

Antioch Dunes evening-primrose (E)

Orcuttia inaequalis

San Joaquin Valley Orcutt grass (T)

Proposed Species

Amphibians

Rana aurora draytonii

Critical habitat, California red-legged frog (PX)

Plants

Cirsium hydrophilum var. *hydrophilum*

Critical habitat, Suisun thistle (PX)

Cordylanthus mollis ssp. *mollis*

Critical habitat, soft bird's-beak (PX)

Quads Containing Listed, Proposed or Candidate Species:

DENVERTON (481B)

HONKER BAY (481C)

FAIRFIELD SOUTH (482A)

CORDELIA (482B)

BENICIA (482C)

VINE HILL (482D)

ELMIRA (498C)

MT. GEORGE (499C)

FAIRFIELD NORTH (499D)

County Lists

Solano County

Listed Species

Invertebrates

Branchinecta conservatio

Conservancy fairy shrimp (E)

Critical habitat, Conservancy fairy shrimp (X)

Branchinecta lynchi

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Elaphrus viridis

Critical habitat, delta green ground beetle (X)

delta green ground beetle (T)

Lepidurus packardi

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

Speyeria callippe callippe

callippe silverspot butterfly (E)

Fish

Acipenser medirostris

green sturgeon (T) (NMFS)

Hypomesus transpacificus

Critical habitat, delta smelt (X)

delta smelt (T)

Oncorhynchus kisutch

coho salmon - central CA coast (E) (NMFS)

Oncorhynchus mykiss

Central California Coastal steelhead (T) (NMFS)

Central Valley steelhead (T) (NMFS)

Critical habitat, Central California coastal steelhead (X) (NMFS)

Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha

Central Valley spring-run chinook salmon (T) (NMFS)

Critical Habitat, Central Valley spring-run chinook (X) (NMFS)

Critical habitat, winter-run chinook salmon (X) (NMFS)

winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii

California red-legged frog (T)

Critical habitat, California red-legged frog (X)

Reptiles

Masticophis lateralis euryxanthus

Alameda whipsnake [=striped racer] (T)

Thamnophis gigas

giant garter snake (T)

Birds

Charadrius alexandrinus nivosus

western snowy plover (T)

Pelecanus occidentalis californicus
California brown pelican (E)

Rallus longirostris obsoletus
California clapper rail (E)

Sternula antillarum (=Sterna, =albifrons) browni
California least tern (E)

Mammals

Reithrodontomys raviventris
salt marsh harvest mouse (E)

Plants

Cirsium hydrophilum var. *hydrophilum*
Suisun thistle (E)

Cordylanthus mollis ssp. *mollis*
soft bird's-beak (E)

Lasthenia conjugens
Contra Costa goldfields (E)
Critical habitat, Contra Costa goldfields (X)

Neostapfia colusana
Colusa grass (T)

Tuctoria mucronata
Solano grass (=Crampton's tuctoria) (E)

Proposed Species

Amphibians

Rana aurora draytonii
Critical habitat, California red-legged frog (PX)

Plants

Cirsium hydrophilum var. *hydrophilum*
Critical habitat, Suisun thistle (PX)

Cordylanthus mollis ssp. *mollis*
Critical habitat, soft bird's-beak (PX)

Key:

- (E) *Endangered* - Listed as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environment documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts
[More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be January 20, 2010.

ATTACHMENT B
CNDDB SPECIES LIST

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
Suisun City

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	ARADB21031	Threatened	Threatened	G4T2	S2	
2 American peregrine falcon <i>Falco peregrinus anatum</i>	ABNKD06071	Delisted	Endangered	G4T3	S2	
3 Antioch Dunes evening-primrose <i>Oenothera deltooides ssp. howellii</i>	PDONA0C0B4	Endangered	Endangered	G5T1	S1.1	1B.1
4 Baker's navarrelia <i>Navarrelia leucocephala ssp. bakeri</i>	PDPLM0C0E1			G4T2	S2.1	1B.1
5 Bolander's water-hemlock <i>Cicuta maculata var. bolanderi</i>	PDAP10M051			G5T3T4	S2	2.1
6 Brewer's western flax <i>Hesperolinon breweri</i>	PDLIN01030			G2	S2.2	1B.2
7 Bridges' coast range shoulderband <i>Helminthoglypta nickliniana bridgesi</i>	IMGASC2362			G2T1	S1	
8 California black rail <i>Laterallus jamaicensis coturniculus</i>	ABNME03041		Threatened	G4T1	S1	
9 California clapper rail <i>Rallus longirostris obsoletus</i>	ABNME05016	Endangered	Endangered	G5T1	S1	
10 California least tern <i>Sterna antillarum browni</i>	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2S3	
11 California linderiella <i>Linderiella occidentalis</i>	ICBRA06010			G3	S2S3	
12 California red-legged frog <i>Rana draytonii</i>	AAABH01022	Threatened		G4T2T3	S2S3	SC
13 California tiger salamander <i>Ambystoma californiense</i>	AAAAA01180	Threatened	unknown code...	G2G3	S2S3	SC
14 Carquinez goldenbush <i>Isocoma arguta</i>	PDAST57050			G1	S1.1	1B.1
15 Coastal Brackish Marsh	CTT52200CA			G2	S2.1	
16 Congdon's tarplant <i>Centromadia parryi ssp. congdonii</i>	PDAST4R0P1			G4T3	S3.2	1B.2
17 Conservancy fairy shrimp <i>Branchinecta conservatio</i>	ICBRA03010	Endangered		G1	S1	
18 Contra Costa goldfields <i>Lasthenia conjugens</i>	PDAST5L040	Endangered		G1	S1.1	1B.1
19 Cooper's hawk <i>Accipiter cooperii</i>	ABNKC12040			G5	S3	
20 Delta green ground beetle <i>Elaphrus viridis</i>	IICOL36010	Threatened		G1	S1	
21 Delta mudwort <i>Limosella subulata</i>	PDSCR10050			G4?Q	S2.1	2.1
22 Delta tule pea <i>Lathyrus jepsonii var. jepsonii</i>	PDFAB250D2			G5T2	S2.2	1B.2
23 Diablo helianthella <i>Helianthella castanea</i>	PDAST4M020			G3	S3.2	1B.2

California Department of Fish and Game
 Natural Diversity Database
 Selected Elements by Common Name - Portrait
 Suisun City

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24 Keck's checkerbloom <i>Sidalcea keckii</i>	PDMAL110D0	Endangered		G1	S1.1	1B.1
25 Mason's lilaeopsis <i>Lilaeopsis masonii</i>	PDAP119030		Rare	G3	S3.1	1B.1
26 Mt. Diablo buckwheat <i>Eriogonum truncatum</i>	PDPGN085Z0			G1	S1.1	1B.1
27 Mt. Diablo fairy-lantern <i>Calochortus pulchellus</i>	PMLIL0D160			G2	S2.1	1B.2
28 Northern Claypan Vernal Pool	CTT44120CA			G1	S1.1	
29 Northern Coastal Salt Marsh	CTT52110CA			G3	S3.2	
30 Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	IICOL5V010			G1G2	S1S2	
31 Sacramento splittail <i>Pogonichthys macrolepidotus</i>	AFCJB34020			G2	S2	SC
32 San Joaquin Valley Orcutt grass <i>Orcuttia inaequalis</i>	PMPOA4G060	Threatened	Endangered	G2	S2.1	1B.1
33 San Joaquin pocket mouse <i>Perognathus inornatus inornatus</i>	AMAFD01061			G4T2T3	S2S3	
34 San Joaquin spearscale <i>Atriplex joaquiniana</i>	PDCHE041F3			G2	S2	1B.2
35 San Pablo song sparrow <i>Melospiza melodia samuelis</i>	ABPBXA301W			G5T2?	S2?	SC
36 Serpentine Bunchgrass	CTT42130CA			G2	S2.2	
37 Suisun Marsh aster <i>Symphotrichum lentum</i>	PDASTE8470			G2	S2	1B.2
38 Suisun shrew <i>Sorex ornatus sinuosus</i>	AMABA01103			G5T1	S1	SC
39 Suisun song sparrow <i>Melospiza melodia maxillaris</i>	ABPBXA301K			G5T2	S2	SC
40 Suisun thistle <i>Cirsium hydrophilum var. hydrophilum</i>	PDAST2E1G1	Endangered		G1T1	S1.1	1B.1
41 Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070		Threatened	G5	S2	
42 Tiburon paintbrush <i>Castilleja affinis ssp. neglecta</i>	PDSCR0D013	Endangered	Threatened	G4G5T1	S1.2	1B.2
43 Valley Needlegrass Grassland	CTT42110CA			G1	S3.1	
44 Wilbur Springs shorebug <i>Saldula usingeri</i>	IIHEM07010			G1	S1	
45 adobe-lily <i>Fritillaria pluriflora</i>	PMLILOV0F0			G3	S3	1B.2
46 alkali milk-vetch <i>Astragalus tener var. tener</i>	PDFAB0F8R1			G1T1	S1.1	1B.2
47 bearded popcorn-flower <i>Plagiobothrys hystriculus</i>	PDBOR0V0H0			G1	S1.1	1B.1

California Department of Fish and Game
 Natural Diversity Database
 Selected Elements by Common Name - Portrait
 Suisun City

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
48 big free-tailed bat <i>Nyctinomops macrotis</i>	AMACD04020			G5	S2	SC
49 big tarplant <i>Blepharizonia plumosa</i>	PDAST1C011			G1	S1.1	1B.1
50 big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	PDAST11061			G3G4T2	S2.2	1B.2
51 brittlescale <i>Atriplex depressa</i>	PDCHE042L0			G2Q	S2.2	1B.2
52 burrowing owl <i>Athene cunicularia</i>	ABNSB10010			G4	S2	SC
53 chaparral ragwort <i>Senecio aphanactis</i>	PDAST8H060			G3?	S1.2	2.2
54 dwarf downingia <i>Downingia pusilla</i>	PDCAM060C0			G3	S3.1	2.2
55 ferruginous hawk <i>Buteo regalis</i>	ABNKC19120			G4	S3S4	
56 foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050			G3	S2S3	SC
57 golden eagle <i>Aquila chrysaetos</i>	ABNKC22010			G5	S3	
58 great blue heron <i>Ardea herodias</i>	ABNGA04010			G5	S4	
59 hairy water flea <i>Dumontia oregonensis</i>	ICBRA23010			G1G3	S1	
60 heartscale <i>Atriplex cordulata</i>	PDCHE040B0			G2?	S2.2?	1B.2
61 hispid bird's-beak <i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	PDSCR0J0D1			G2T2	S2.1	1B.1
62 hoary bat <i>Lasiurus cinereus</i>	AMACC05030			G5	S4?	
63 legenere <i>Legenere limosa</i>	PDCAM0C010			G2	S2.2	1B.1
64 midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	ICBRA03150			G2	S2	
65 monarch butterfly <i>Danaus plexippus</i>	IILEPP2010			G5	S3	
66 northern harrier <i>Circus cyaneus</i>	ABNKC11010			G5	S3	SC
67 pappose tarplant <i>Centromadia parryi</i> ssp. <i>parryi</i>	PDAST4R0P2			G4T2	S2.2	1B.2
68 recurved larkspur <i>Delphinium recurvatum</i>	PDRAN0B1J0			G2	S2.2	1B.2
69 robust monardella <i>Monardella villosa</i> ssp. <i>globosa</i>	PDLAM180P7			G5T2	S2.2	1B.2
70 saline clover <i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	PDFAB400R5			G5T2?	S2.2?	1B.2

California Department of Fish and Game
 Natural Diversity Database
 Selected Elements by Common Name - Portrait
 Suisun City

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
71 salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	AMAFF02040	Endangered	Endangered	G1G2	S1S2	
72 saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	ABPBX1201A			G5T2	S2	SC
73 short-eared owl <i>Asio flammeus</i>	ABNSB13040			G5	S3	SC
74 showy rancheria clover <i>Trifolium amoenum</i>	PDFAB40040	Endangered		G1	S1.1	1B.1
75 slender-leaved pondweed <i>Potamogeton filiformis</i>	PMPOT03090			G5	S1S2	2.2
76 soft bird's-beak <i>Cordylanthus mollis ssp. mollis</i>	PDSCROJ0D2	Endangered	Rare	G2T1	S1.1	1B.2
77 tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020			G2G3	S2	SC
78 valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened		G3T2	S2	
79 vernal pool fairy shrimp <i>Branchinecta lynchi</i>	ICBRA03030	Threatened		G3	S2S3	
80 vernal pool tadpole shrimp <i>Lepidurus packardii</i>	ICBRA10010	Endangered		G3	S2S3	
81 western leatherwood <i>Dirca occidentalis</i>	PDTHY03010			G2G3	S2S3	1B.2
82 western pond turtle <i>Actinemys marmorata</i>	ARAAD02030			G3G4	S3	SC
83 western red bat <i>Lasiurus blossevillii</i>	AMACC05060			G5	S3?	SC
84 white-tailed kite <i>Elanus leucurus</i>	ABNKC06010			G5	S3	

ATTACHMENT C
CNPS SPECIES LIST

Status: search results - Thu, Oct. 22, 2009 17:24 c

{QUADS_123} = ~ m/482A|499C|499D|481B|481C|498C|482B|482D

Tip: +Lathyrus +"coastal dunes" returns only those Lathyrus in coastal dunes. Note the "+" and quotes.[all tips and help.][search history]

Your Quad Selection: **Fairfield South (482A)** 3812221, **Mount George (499C)** 3812232, **Fairfield North (499D)** 3812231, **Denverton (481B)** 3812128, **Honker Bay (481C)** 3812118, **Elmira (498C)** 3812138, **Cordelia (482B)** 3812222, **Benicia (482C)** 3812212, **Vine Hill (482D)** 3812211

Hits 1 to 50 of 51

Requests that specify topo quads will return only Lists 1-3.

To save selected records for later study, click the ADD button.

Selections will appear in a new window.

open	save	hits	scientific	common	family	CNPS
	<input type="checkbox"/>	1	<u>Astragalus tener</u> var. tener	alkali milk-vetch	Fabaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Atriplex cordulata</u>	heartscale	Chenopodiaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Atriplex depressa</u>	brittlescale	Chenopodiaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Atriplex joaquiniana</u>	San Joaquin spearscale	Chenopodiaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Atriplex persistens</u>	vernal pool smallscale	Chenopodiaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Balsamorhiza macrolepis</u> var. macrolepis	big-scale balsamroot	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Blepharizonia plumosa</u>	big tarplant	Asteraceae	List 1B.1
	<input type="checkbox"/>	1	<u>Brodiaea californica</u> var. leptandra	narrow-anthered California brodiaea	Liliaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Calochortus pulchellus</u>	Mt. Diablo fairy-lantern	Liliaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Castilleja affinis</u> ssp. neglecta	Tiburon paintbrush	Scrophulariaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Ceanothus purpureus</u>	holly-leaved ceanothus	Rhamnaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Centromadia parryi</u> ssp. congdonii	Congdon's tarplant	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Centromadia parryi</u> ssp. parryi	pappose tarplant	Asteraceae	List 1B.2
			<u>Cicuta maculata</u> var.	Bolander's water-		List

	<input type="checkbox"/>	1	<u>bolanderi</u> 	hemlock	Apiaceae	2.1
	<input type="checkbox"/>	1	<u>Cirsium hydrophilum</u> var. <u>hydrophilum</u> 	Suisun thistle	Asteraceae	List 1B.1
	<input type="checkbox"/>	1	<u>Cordylanthus mollis</u> ssp. <u>hispidus</u>	hispid bird's-beak	Scrophulariaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Cordylanthus mollis</u> ssp. <u>mollis</u> 	soft bird's-beak	Scrophulariaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Delphinium</u> <u>recurvatum</u> 	recurved larkspur	Ranunculaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Dirca occidentalis</u> 	western leatherwood	Thymelaeaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Downingia pusilla</u> 	dwarf downingia	Campanulaceae	List 2.2
	<input type="checkbox"/>	1	<u>Erigeron biolettii</u> 	streamside daisy	Asteraceae	List 3
	<input type="checkbox"/>	1	<u>Erigeron greenei</u>	Greene's narrow- leaved daisy	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Eriogonum luteolum</u> var. <u>caninum</u> 	Tiburon buckwheat	Polygonaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Eriogonum truncatum</u> 	Mt. Diablo buckwheat	Polygonaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Fritillaria pluriflora</u> 	adobe-lily	Liliaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Gilia capitata</u> ssp. <u>tomentosa</u> 	woolly-headed gilia	Polemoniaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Helianthella castanea</u> 	Diablo helianthella	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Hesperolinon breweri</u> 	Brewer's western flax	Linaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Hesperolinon</u> <u>serpentinum</u> 	Napa western flax	Linaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Isocoma arguta</u> 	Carquinez goldenbush	Asteraceae	List 1B.1
	<input type="checkbox"/>	1	<u>Lasthenia conjugens</u> 	Contra Costa goldfields	Asteraceae	List 1B.1
	<input type="checkbox"/>	1	<u>Lathyrus jepsonii</u> var. <u>jepsonii</u> 	Delta tule pea	Fabaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Legenere limosa</u> 	legenere	Campanulaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Lessingia hololeuca</u> 	woolly-headed lessingia	Asteraceae	List 3
	<input type="checkbox"/>	1	<u>Lilaeopsis masonii</u> 	Mason's lilaeopsis	Apiaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Limosella subulata</u> 	Delta mudwort	Scrophulariaceae	List 2.1
	<input type="checkbox"/>	1	<u>Micropus amphibolus</u> 	Mt. Diablo cottonweed	Asteraceae	List 3.2
	<input type="checkbox"/>	1	<u>Monardella villosa</u> ssp. <u>globosa</u> 	robust monardella	Lamiaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Navarretia</u> <u>leucocephala</u> ssp.	Baker's navarretia	Polemoniaceae	List 1B.1

bakeri 						
	<input type="checkbox"/>	1	<u>Oenothera deltoides</u> ssp. howellii 	Antioch Dunes evening-primrose	Onagraceae	List 1B.1
	<input type="checkbox"/>	1	<u>Orcuttia inaequalis</u> 	San Joaquin Valley Orcutt grass	Poaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Plagiobothrys</u> hystriculus 	bearded popcorn- flower	Boraginaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Potamogeton filiformis</u>	slender-leaved pondweed	Potamogetonaceae	List 2.2
	<input type="checkbox"/>	1	<u>Rhynchospora</u> californica 	California beaked- rush	Cyperaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Sidalcea hickmanii</u> ssp. napensis	Napa checkerbloom	Malvaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Sidalcea hickmanii</u> ssp. viridis 	Marin checkerbloom	Malvaceae	List 1B.3
	<input type="checkbox"/>	1	<u>Symphotrichum</u> lentum 	Suisun Marsh aster	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Trichostema ruygtii</u> 	Napa bluecurls	Lamiaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Trifolium amoenum</u> 	two-fork clover	Fabaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Trifolium</u> depauperatum var. hydrophilum 	saline clover	Fabaceae	List 1B.2

To save selected records for later study, click the ADD button.

Selections will appear in a new window.

For more results click below:



ATTACHMENT D

SPECIES OBSERVED WITHIN THE BSA

Plant Species Observed within the Suisun City Project 10/28/09	
Scientific Name	Common Name
Xanthium strumarium	Cocklebur
Rumex crispus	Curly dock
Distichlis spicata	Saltgrass
Holcus lanatus	Velvetgrass
Cynodon dactylon	Bermuda grass
Trifolium spp.	Clover
Foeniculum vulgare	Fennel
Rumex acetocella	Sheep sorrel
Centaurea solstitialis	Yellow star thistle
Brassica spp.	Mustard
Convolvulus arvensis	Bindweed
Hordeum marinum gussoneum	Mediterranean barley
Lactuca serriola	Prickly lettuce
Picris echioides	Bristly ox-tongue
Erodium cicutarium	Red-stemmed filaree
Lathyrus spp.	Pea
Vicia spp.	Vetch
Polygonum arenastrum	Common knotweed
Lolium perene	Annual rye-grass
Plagiobothrys spp.	Popcorn flower
Polypogon monspeliensis	Annual beardgrass
Lotus corniculatus	Bird's-foot trefoil
Epilobium spp.	Willowherb
Lythrum spp.	Loosestrife
Eryngium vaseyi	Coyote-thistle
Avena fatua	Wild oats
Kickxia elatine	Sharp-leaved fluellin
Conyza canadensis	Canadian horseweed
Mesembryanthemum crystallinum	Ice plant
Opuntia spp.	Prickly pear cactus
Raphanus spp.	Wild radish
Populus fremontii	Fremont's cottonwood
Rubus discolor	Himalayan blackberry
Baccharis pilularis	Coyote bush
Crypsis schoenoides	Swamp picklegrass
Melilotus alba	Sweet melic
Brassica nigra	Black mustard
Lepidium latifolium	Perennial pepperweed
Plantago lanceolata	English plantain
Trypogon spp.	Salsify
Cyperus esculentes	Yellow nutsedge
Centaurea calcitrapa	Purple starthistle
Ambrosia artemisiifolia	Annual ragweed
Hemizonia parryi ssp. parryi	Pappose tarplant
Malvella leprosa	Alkali-mallow
Malva sylvestris	High mallow
Wildlife Species Observed	
Scientific Name	Common Name
Cathartes aura	Turkey vulture
Corvus brachyrhynchos	American crow

Scientific Name	Common Name
Lepus californicus	Jackrabbit
Agelaius phoeniceus	Red-wing blackbird
Larus californicus	California gull
Columba livia	Rock dove
Zenaidura macroura	Mourning dove
Charadrius vociferus	Killdeer