

Biological Assessment
for the
Wild Goose Phase 3 Expansion Project

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Attachment A: Official USFWS Species List and CNDDDB List and Maps
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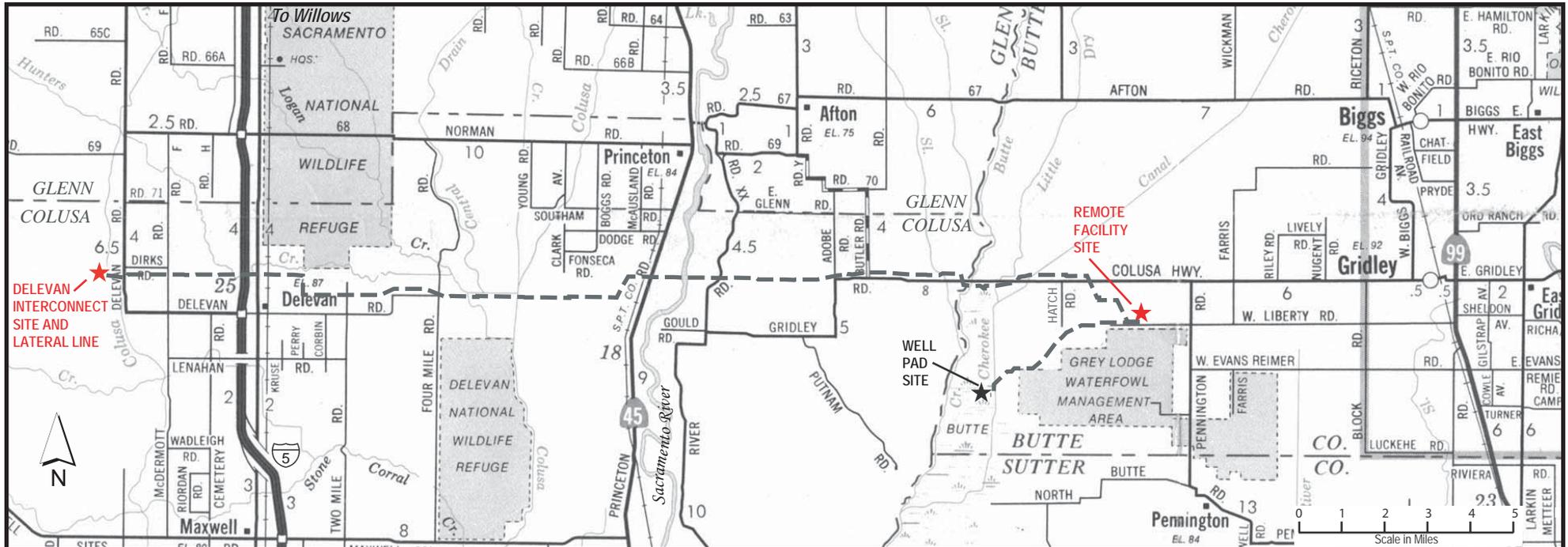
1.0 INTRODUCTION

1.1 SCOPE

The following report summarizes existing and potential vegetation and wildlife resources adjacent to the Wild Goose Storage, LLC (WGS) Phase 3 Expansion Project (Project) in Butte and Colusa Counties, California (see Figure 1: Project Vicinity Map). This report is based on a Biological Reconnaissance Survey conducted on December 4, 2008 and February 25, 2009 and the “Biological Assessment for the Wild Goose Storage Inc. Gas Storage Facilities Expansion Project,” prepared by Essex Environmental in June 2001, now known as TRC Solutions, Inc.

1.2 PROJECT BACKGROUND

The original Wild Goose Gas Storage Project in Butte County, California was constructed between April 1997 and April 1999 and involved the development of a depleted and abandoned underground natural gas field for use in natural gas storage (the “Base Project”). There was an expansion between July 2002 and April 2004, which included a new interconnect facility adjacent to Pacific Gas and Electric Company (PG&E)’s Delevan Compressor Station, a new pipeline from the Remote Facility Site to PG&E’s Line 400/401 and interconnect at the Delevan Compressor Station, expanding the existing Remote Facility Site approximately 650 feet to the west, and expanding the existing well pad site approximately 195 feet to the west (the “Expansion”).



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February 26, 2009, TRC

--- Line 400 Connection Pipeline and Storage Pipeline Loop

★ Project Sites

Study Area



Figure 1: Vicinity Map
Wild Goose Phase 3 Expansion Project

2.0 PROJECT DESCRIPTION

WGS is proposing to expand its existing natural gas storage facility to more fully utilize the injection, withdrawal and storage capacity of the most suitable natural gas storage reservoirs in the field. In order to effect fuller utilization WGS is proposing to expand its Remote Facility Site and to modify the Delevan Interconnect Site and install a new lateral pipeline between the Interconnect Site and PG&E Line 400/401.

2.1 REMOTE FACILITY SITE

The compression will be increased from approximately 21,000 HP (six compressor units) to a total of approximately 35,000 HP (approximately 10 compressor units). Two new process trains (for a total of five trains) will be installed.

To allow for the installation of the additional process and compression equipment, the RFS will need to be expanded from the current 11.9 acres to approximately 16.4 acres (see Figure 2). The lease area will be extended approximately 540 feet to the west to occupy an area currently used for farm equipment and parking during the hunting season. The proposed expansion area, which includes the berms, will increase the lease area an additional 4.5 acres for a total of 16.4 acres. The operations area will be enclosed by a 6-foot-high chain link security fence. The fenced operations area will increase by 3.7 acres to a total of 12.4 acres. The perimeter landscaped berm will be extended and another access driveway off West Liberty Road may be added to the west edge of the lease area as part of the expansion. Rice field drainage systems will be relocated as required, and the parking area will be shifted from the existing location approximately 540 feet west, and will reside adjacent to the west side of the RFS.

2.2 DELEVAN INTERCONNECT SITE

The custody transfer and metering point of natural gas movements between PG&E's Line 400 system and WGS Operations occurs at the Delevan Interconnect Site (see Figure 3). An expansion to the Interconnect Site will be required to accommodate the increase in withdrawal and injection volume. A new lateral pipeline will need to be constructed between the Interconnect Site and PG&E's Line 400/Line 401 transmission system. A new easement running adjacent to the existing 30-foot wide by 670-foot long easement will be needed for the lateral pipeline. The new lateral line will be hot tapped into PG&E's Line 401 transmission line. Increased meter capacity will be required, as well as a means of regulating flow on and off both Line 400 and Line 401. At this time PG&E believes that the new meter and associated pipe, valves and equipment can be housed within the existing 0.6 acre Interconnect Site. PG&E is conducting an engineering study to confirm piping, equipment design and spacing requirements. However, this biological assessment assumes that the facility will need to be expanded by approximately 140 feet by 200 feet and that staging of equipment, temporary pipeline workspace, and access will be conducted in the area between the existing access road and the new lateral pipeline. The modified Interconnect Site will be fenced for security, and will be split into two sections by security fencing – one area for PG&E's custody transfer and metering equipment and the other for WGS's equipment. Utility service required at the Interconnect Site is the standard electric service that is already provided by PG&E's existing 12 kilo Volt (kV) electric distribution line running along the access road. PG&E's portion of the Delevan Interconnect Site will include valves, meters, pipeline monitoring equipment, and a small pre-

engineered metal building to house its instrumentation electronics, calibration system, computer control system, high voltage alternating current (HVAC), recorders, chromatograph, valve solenoids, and communications and metering equipment. WGS's portion of the equipment at the meter station site include an actuated block valve, control valve and associated electrical instrumentation devices for monitoring and control of equipment. The station piping will tie-in immediately downstream of the 30-inch pig launcher, before the pipeline enters the ground departing east towards the RFS.



Figure 2

Remote Facility Site

Scale in Feet
200 100 0 200 400

Wild Goose Phase 3 Expansion Project





PG&E
Delevan
Station

Glenn-Colusa Canal

New Lateral Line

Existing
Delevan
Interconnect
Site

Line 400 Connection Pipeline

PG&E L400/401

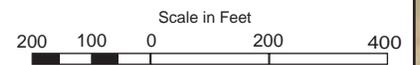
789 ft

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Figure 3

Delevan Interconnect Site



Wild Goose Phase 3 Expansion Project



3.0 ENVIRONMENTAL SETTING

The Project is located near the center of the Sacramento Valley approximately 62 miles northwest of Sacramento. The facilities are located within the very flat terrain of the valley floor. Like most parts of California, the region experiences a Mediterranean type climate, with hot dry summers and mild wet winters.

3.1 VEGETATION

The valley area historically has consisted of an extensive wetland and marsh system sustained by the Sacramento River and its tributaries, including Butte Creek and the Colusa Drain area. Over the last 100 years, most of this system has been developed into agricultural production, primarily rice and millet. To the west of the Glenn-Colusa Canal, which encompasses the Delevan Interconnect Site, the plant community type changes to annual grassland that contains vernal pools and swales. Therefore, plant community types consist of natural landscapes (primarily grasslands) and human-altered landscapes (agriculture). In general, the natural landscapes that can be found within the project vicinity include the Sacramento National Wildlife Refuge, the Gray Lodge Wildlife Area, and the Butte Sink.

3.2 SENSITIVE SPECIES

During planning for the Project, it was determined that there were 19 sensitive plant and 22 sensitive wildlife species whose range could encompass the Project area (see Table 1). Many of these identified species were eliminated from further consideration for one or more of the following reasons:

- Lack of suitable habitat in the project study area
- Outside of species range

The results of this evaluation indicated that 2 plant and 15 animal species were known to occur in the Project study area, or that the proposed Project components could affect suitable habitat within their known range. These species are highlighted gray in Table 1 and described below.

3.3 STATE AND FEDERALLY LISTED SPECIES

Palmate-bracted Bird's Beak (*Cordylanthus palmatus*)

Palmate-bracted bird's beak is listed under both the Federal and California Endangered Species Acts as an endangered species. It is found in chenopod scrub and low alkaline grasslands. There are only three populations known to exist in Colusa County. There is a low potential for this species to occur in the grasslands around the Delevan Interconnect Site.

Milo Baker's Lupine (*Lupinus milo-bakeri*)

Milo Baker's Lupine is listed under the California Endangered Species Act as a threatened species. It is found in the foothill woodlands and valley grasslands of Colusa County. There is a low potential for this species to occur in the grasslands around the Delevan Interconnect Site.

Table 1: Special Status Species with Potential to Occur in the Project Area

Common Name Scientific Name	Legal Status			Plant Community / Habitat Association	Potential in the Project Study Area	
	Federal	State	CNPS		Remote Facility Site	Delevan Interconnect Site
<i>Plants</i>						
Ferris's milkvetch <i>Astragalus tener</i> var. <i>ferrisiae</i>	**		1B	Playas, mesic meadows, and subalkaline flats in low grasslands. Butte County.	No suitable habitat.	Not known from Colusa County.
Heartscale <i>Atriplex cordulata</i>	**		1B	Saline/alkaline grassland/scrub, pastures. An annual saltbush. Butte County.	No suitable habitat.	Not known from Colusa County.
Brittlescale <i>Atriplex depressa</i>	**		1B	Chenopod scrub, alkaline meadows, low grasslands. Glenn and Colusa Counties.	No suitable habitat.	Potential habitat present in the vicinity of the project site.
San Joaquin spearscale <i>Atriplex joaquiniana</i>	**		1B	Valley and foothill grassland, Chenopod scrub, restricted to alkaline/saline soils. Glenn and Colusa Counties.	No suitable habitat.	Potential habitat present in the vicinity of the project site.
Lesser saltscale <i>Atriplex minuscule</i>			1B	Chenopod scrub, alkaline meadows, low grasslands, Butte County.	No suitable habitat.	Not known from Colusa County.
Vernal pool smallscale <i>Atriplex persistens</i>			1B	Chenopod scrub, alkaline meadows, low grasslands, Butte and Glenn Counties.	No suitable habitat.	Vernal pool habitat found in the vicinity of the project site and will be avoided.
Palmate-bracted bird's beak <i>Cordylanthus palmatus</i> *	FE	SE	1B	Chenopod scrub, low alkaline grasslands. Only three populations known to exist. Colusa County.	No suitable habitat.	Potential habitat present in the vicinity of the project site.

* Special status species highlighted in gray have been known to occur within the project area and/or have suitable habitat within their known range which may be affected by various project components. These species are described in further detail in section 3.3 of this report.

Common Name Scientific Name	Legal Status			Plant Community / Habitat Association	Potential in the Project Study Area	
	Federal	State	CNPS		Remote Facility Site	Delevan Interconnect Site
Pink creamsacs <i>Castilleja rubicundula</i> ssp. <i>rubicundula</i>			1B	Chaparral, meadows and seeps, valley and foothill grassland. Butte County.	No suitable habitat.	No suitable habitat.
Diamond-petaled California poppy <i>Eschschotzia rhombipetala</i>			1B	Valley and foothill grasslands, prefers clay soils. Colusa County.	No suitable habitat.	Potential habitat present in the vicinity of the project study area.
Adobe lily <i>Fritillaria pluriflora</i>	**		1B	Low grasslands with adobe clay soils, chaparral, cismontaine woodlands. Butte, Glenn, Colusa Counties.	No suitable habitat.	Potential habitat present in the vicinity of the project study area.
Woolly rose-mallow <i>Hibiscus lasiocarpus</i>			2	Standing water, tule marsh, rice field irrigation systems. Common in Butte Sink, along canals, streams, marshes, freshwater soaked riverbanks. Butte County.	Limited potential of suitable habitat in the project site vicinity.	No suitable habitat.
Ahart's rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	**		1B	Mesic grasslands, margins of vernal pools. Butte County.	No suitable habitat.	Not known from Colusa County.
Colusa layia <i>Layia septentrionalis</i>			1B	Valley and foothill grassland, cismontane woodlands. Colusa County.	No suitable habitat.	Potential habitat in the project vicinity.
Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i>			1B	Low-lying valley grasslands and mesic meadows, edges of vernal pools and swales, ditches and slow-moving waterways on alkaline and subalkaline soils.	No suitable habitat.	No suitable habitat.

Common Name Scientific Name	Legal Status			Plant Community / Habitat Association	Potential in the Project Study Area	
	Federal	State	CNPS		Remote Facility Site	Delevan Interconnect Site
Milo Baker's lupine <i>Lupinus milo-bakeri</i>	**	ST	1B	Foothill woodlands and valley grasslands. Known from 2 locations in Colusa County and 20 locations in Mendocino County. Colusa County.	No suitable habitat.	Potential habitat in the project vicinity.
Little mousetail <i>Myosurus minimus</i> ssp. <i>apus</i>	**		3	Wet places, vernal pools, and marshes. Very strongly associated with alkaline/saline soils. Butte and Colusa Counties.	No suitable habitat.	No suitable habitat.
Colusa grass <i>Neostapfia colusana</i>	FT	SE	1B	Vernal pools and seasonal wetlands (often alkaline). Not known in Butte County. Species likely extirpated in Colusa County.	No suitable habitat.	No suitable habitat.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	**		1B	Freshwater marsh, seasonal wetland. Butte County.	Potential habitat in ditches, canals, and managed wetland areas.	No suitable habitat.
Brazilian watermeal <i>Wolffia brasiliensis</i>			2	Freshwater marsh. Found in canal near the visitor's center of the Gray Lodge Wildlife Area. Butte County.	No suitable habitat.	No suitable habitat.
<i>Invertebrates</i>						
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FE			Endemic to vernal pools and swales in the Central Valley. Dependent on seasonal water fluctuations and water quality. Butte, Glenn, Sutter, Colusa Counties.	Vernal pool and related swale habitats are not found in the project study area.	Vernal pool and related swale habitats are found along the access road to the Delevan Interconnect Site and will be avoided.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT			Endemic to vernal pools and swales in the Central Valley. Dependent on seasonal water fluctuations and water quality. Listed for Butte, Glenn, Sutter, and Colusa Counties.	Vernal pool and related swale habitats are not found in the project study area.	Vernal pool and related swale habitats are found along the access road to the Delevan Interconnect Site and will be avoided.

Common Name Scientific Name	Legal Status			Plant Community / Habitat Association	Potential in the Project Study Area	
	Federal	State	CNPS		Remote Facility Site	Delevan Interconnect Site
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT			Dependent on elderberry shrubs as a host plant. Potential habitat is shrubs with stems 1 inch in diameter or greater. Listed for Butte, Glenn, Sutter, and Colusa Counties.	No suitable habitat.	No suitable habitat.
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	FE			Endemic to vernal pools and swales in the Central Valley. Dependent on seasonal water fluctuations and water quality. Listed for Butte, Glenn, Sutter, and Colusa Counties.	Vernal pool and related swale habitats are not found in the study area.	Vernal pool and related swale habitats are found along the access road to the Delevan Interconnect Site and will be avoided.
Amphibians						
California tiger salamander <i>Ambystoma californiense</i>	FT	CSC		Need underground refuges, especially ground squirrel burrows & vernal pools or other seasonal water sources for Breeding	Unlikely. Gray Lodge Wildlife Area (Butte County) does not appear to support the salamanders, although it did historically. However, it now represents a lost habitat.	Unlikely. Outside of known range.
Western spadefoot toad <i>Spea hammondi</i>	**	CSC		Valley and foothill grasslands, river floodplains, marshes, and alluvial fans. Requires loose, sandy, or gravely soil. Grasslands with shallow temporary pools optimum (e.g., vernal pools). Susceptible to predation by red swamp crayfish and bullfrogs. Listed for Butte, Glenn, Sutter, and Colusa Counties.	Unlikely to occur in the project vicinity.	Potential habitat west of the Glenn-Colusa Canal and vernal pool sites. Vernal pool areas will be avoided.

Common Name Scientific Name	Legal Status			Plant Community / Habitat Association	Potential in the Project Study Area	
	Federal	State	CNPS		Remote Facility Site	Delevan Interconnect Site
Reptiles						
Northwestern pond turtle <i>Actinemys marmorata marmorata</i>	**	CSC		Forage in wetlands, ponds, marshes, lakes, streams and irrigation ditches. Well-vegetated banks and basking logs required. Typically locate nests on unshaded slopes. Listed for Butte, Glenn, Sutter, and Colusa Counties.	Likely. Has been observed in project study area.	No suitable habitat.
Giant garter snake <i>Thamnophis gigas</i>	FT	ST		Forage in permanent or seasonal slow-moving water with emergent vegetation, mud bottoms, and dirt banks. Occur in irrigation ditches year-round, rice fields during growing season. Absent from waters with predatory fish. Require upland sites or elevated features above floodwaters for winter refugia. Butte, Glenn, Sutter, Colusa Counties.	Likely. Has been observed in project study area.	No suitable habitat.

Common Name Scientific Name	Legal Status			Plant Community / Habitat Association	Potential in the Project Study Area	
	Federal	State	CNPS		Remote Facility Site	Delevan Interconnect Site
Birds						
Tricolored blackbird <i>Agelaius tricolor</i>	**	CSC		Favors mature stands of cattails and scrub near water, blackberries, hay fields, wheat fields. Nesting synchronous. Colonies have been reported outside the project study area. Butte and Glenn Counties.	Potential nesting habitat within 0.5 mile. Survey during the appropriate season.	No suitable habitat.
Western burrowing owl <i>Athene cunicularia</i>	**	CSC		Primarily grassland, also occasionally in levees and irrigation dikes, if there is enough soil for a burrow. Dependent on ground squirrels for burrows. Listed for Butte, Glenn, Sutter, and Colusa Counties.	No suitable habitat.	Potential suitable habitat in the project vicinity. Survey suitable habitat.
Swainson's hawk <i>Buteo swainsoni</i>		ST		Riparian floodplain forest for nesting, foraging over any open land within 10 miles of nest site.	Potential nest trees within 0.5 mile. Survey during appropriate season.	Potential nest trees within 5 miles.
Black tern <i>Chlidonias niger</i>	**	CSC		Inland lakeshores and marshes. Some nesting in rice fields. Nests somewhat communally in small groups just over or on water. Listed for Butte, Glenn, Sutter, and Colusa Counties.	Observed foraging in project study area in 2001. Survey suitable habitat.	No suitable habitat.
Northern harrier <i>Circus cyaneus</i>		CSC		Nests primarily in emergent wetlands, but also uses grasslands and open grain fields.	Potential foraging habitat in the project vicinity.	Unlikely to occur in the project vicinity.

Common Name Scientific Name	Legal Status			Plant Community / Habitat Association	Potential in the Project Study Area	
	Federal	State	CNPS		Remote Facility Site	Delevan Interconnect Site
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FC	SE		Riparian, floodplain forest, shrubs. Prefer large woodlands with unbroken canopy and trees with vertical branches for nesting.	No suitable habitat.	No suitable habitat.
White-tailed kite <i>Elanus leucurus</i>		FP		Hunts over all habitats, including agricultural areas. Perches and nests in trees and shrubs in riparian areas. Glenn, Sutter, and Colusa Counties.	Year-round resident. Potential nesting or roosting within 0.5 mile. Survey suitable habitat.	Unlikely to occur in the project vicinity.
Merlin <i>Falco columbarius</i>		WL		Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Butte County.	No suitable habitat.	No suitable habitat.
Greater sandhill crane <i>Grus canadensis tabida</i>		ST, FP		Nests in wetland habitats in northeastern California and winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water used as a communal roost site. About 35 adults observed within 1.5 mile northeast of RFS and 50 within 0.7 miles southeast of RFS.	No suitable nesting habitat.	No suitable nesting habitat.
Loggerhead shrike <i>Lanius ludovicianus</i>	**	CSC		Common resident and winter visitor throughout the lowlands and foothills of California. Listed for Butte, Glenn, Sutter, and Colusa Counties. Confirmed on Gray Lodge near Remote Facility Site (RFS). Prefers habitats with scattered shrubs, trees, posts, fences, utility lines and other perches.	Have been observed in the project study area. Survey suitable habitat.	Unlikely to occur in the project vicinity.

Common Name Scientific Name	Legal Status			Plant Community / Habitat Association	Potential in the Project Study Area	
	Federal	State	CNPS		Remote Facility Site	Delevan Interconnect Site
California black rail <i>Laterallus jamaicensis coturniculus</i>		ST		Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	Have been recorded 3.5 miles northwest of site in semi-permanent wetlands. Very low potential within roadside drainage.	No suitable habitat.
White-faced ibis <i>Plegadis chihi</i>	**	WL		Any water area, rice field or other harvested grain fields. Nests in aquatic vegetation, shrubs and low trees in large colonies. Listed for Butte, Glenn, Sutter, and Colusa Counties.	Potential foraging habitat in the project vicinity.	Unlikely to occur in the project vicinity.
Bank swallow <i>Riparia riparia</i>		ST		Colonial nesters in riparian and other lowland habitats where they dig neat holes in vertical banks and cliffs with fine-textured or sandy soils.	No suitable habitat.	No suitable habitat.
Mammals						
San Joaquin pocket mouse <i>Perognathus inornatus</i>	**	CSC		Dry, open, grassy or weedy areas; fine-textured soil. Listed for Butte, Glenn, Sutter, and Colusa Counties.	No suitable habitat.	Unlikely. Not documented during previous surveys.

Sources: CDFG, 1985; CDFG, 1990; CDFG, 2008; CNPS, 1993; Hickman, 1993, USFWS, 2008; Zeiner *et al.*, 1990

STATUS CODES:

U.S. Fish and Wildlife Service

- FC = Listed as Candidate by the Federal Government
- FE = Listed as Endangered by the Federal Government
- FT = Listed as Threatened by the Federal Government
- ** = In 2002, this used to be Federal Species of Concern (FSC), but the Sacramento Fish and Wildlife office no longer maintains a list of species of special 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.

California Department of Fish and Game

- CSC = Listed as California Species of Special Concern
- FP = Fully Protected
- SE = Listed as Endangered by the State Government
- ST = Listed as Threatened by the State Government
- WL = Watch List

California Natural Plant Society

- CNPS 1A = Presumed extinct in California
- CNPS 1B = Rare, threatened, or endangered in California
- CNPS 2 = Rare, threatened, or endangered in California, but more common elsewhere
- CNPS 3 = Need more information about this plant (Review List)

Conservancy Fairy Shrimp (*Branchinecta conservatio*), Vernal Pool Fairy Shrimp (*Branchinecta lynchi*), and Vernal Pool Tadpole Shrimp (*Lepidurus packardii*)

Three types of fairy shrimp that are typically found in vernal pools and swales could potentially be found in the Project area. Conservancy fairy shrimp and vernal pool tadpole shrimp are listed under the Federal Endangered Species Act as endangered species. Vernal pool fairy shrimp is listed under the Federal Endangered Species Act as threatened species. These species may be present in the vernal pools that were identified along the access road to the Delevan Interconnect Site.

Giant Garter Snake (*Thamnophis gigas*)

Giant garter snake is listed under both the Federal and California Endangered Species Acts as a threatened species. The giant garter snake is one of several garter snakes found in North America. It is endemic to the valley floor wetlands of the Sacramento and San Joaquin Valleys of Central California (USFWS, 1993). They are the largest species of garter snakes, reaching up to five feet in length with females tending to be slightly longer and proportionately heavier than the males. This snake's cryptic coloration varies from brownish to olive with a checkered pattern of black spots, separated by a yellow dorsal stripe and two light colored lateral stripes. They are active diurnal snakes, basking on emergent vegetation not far from water during the day. At night they retreat to small mammal burrows and crevices. Giant garter snakes are active from mid-March until October and breeding typically occurs in March and April. They are dormant during the winter months of November to mid-March, when they retreat to winter hibernacula.

The giant garter snake is one of the most aquatic species of garter snakes, rarely inhabiting areas away from water (California Department of Fish and Game (CDFG), 1979). They are primarily associated with wetlands, marshes and sloughs, low gradient streams, agricultural wetlands, and irrigation and drainage canals. They forage along streams for fish, amphibians, and amphibian larvae. They are absent from larger rivers and do not occupy riparian habitat. While once a common snake, the elimination and degradation of their preferred aquatic habitat has drastically reduced their population.

Habitat loss and urbanization are the main factors contributing to the decline in this species, with the majority of their original favored wetlands lost to development. In addition, contaminants from agricultural fields and introduced predators threaten the giant garter snakes' future success and viability (CDFG, 1979).

Giant garter snakes could forage in the rice fields and ditches surrounding the Remote Facility Site and could utilize the parking area and the berms around the Remote Facility Site as upland hibernacula.

Swainson's Hawk (*Buteo swainsoni*)

Swainson's hawk is listed under the California Endangered Species Act as a threatened species. At one time, Swainson's hawks were amongst the most common raptor species in the state, but it is estimated that their breeding population has declined by 91 percent since 1900 (Bloom, 1980). Swainson's hawks breed in California, primarily within the Central Valley, and migrate to South

America for the winter. Potential nesting habitat includes riparian woodlands, isolated trees, oak groves, and roadside trees. This habitat is generally adjacent or in close proximity to agricultural fields, where they forage on voles (*Microtus* spp.), pocket gophers (*Thomomys bottae*), mice (*Peromyscus* spp.), ground squirrels (*Spermophilus beecheyi*), and various birds and insects.

The reason for the decline in nesting pairs has been attributed to loss of native nesting and foraging habitat along with conversion of agricultural areas to urban land uses. In addition, herbicide use, shooting, and disturbances at their wintering sites have affected Swainson's hawks. Swainson's hawks appear to favor riparian trees for nesting and much of the riparian habitat in the Central Valley has been lost to agricultural practices and flood control activities.

Swainson's hawks could nest in trees within 0.5 mile of the Remote Facility Site and within 5 miles of the Delevan Interconnect Site.

3.4 SPECIES OF SPECIAL CONCERN

In 2002, the Federal Species of Concern (FSC) was eliminated from consideration and the Sacramento Fish and Wildlife office no longer maintains a list of species of special 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. The state of California still maintains a list of Species of Special Concern as detailed below.

Western Spadefoot Toad (*Spea hammondi*)

The Western spadefoot Toad is considered a California species of concern. Potential breeding sites are in the form of vernal pools or swales and summer estivation sites are in the form of cracks or small mammal burrows in the grasslands. This species could utilize the vernal pools along the access road to the Delevan Interconnect Site but are not likely to occur at the Delevan Interconnect Site which is approximately 2,000 feet away.

Northwestern Pond Turtle (*Actinemys marmorata marmorata*)

Northwestern pond turtle is considered a California species of concern. Female pond turtles typically deposit eggs within excavated holes on unshaded, often partially south-facing slopes, with a substrate of high clay or silt fraction. Most nesting sites are located within 200 yards of an aquatic site (Jennings and Hayes, 1994). This species could potentially be found in the ditches associated with rice fields at the Remote Facility Site.

Tricolored Blackbird (*Agelaius tricolor*)

Tricolored blackbird is considered a Federal and California species of concern. Nesting colonies of tricolored blackbirds can be found in thickets of riparian scrub, blackberry, wild rose, or freshwater marsh near water. Breeding takes place between mid-April and late July. Colonies will forage in pastures, grasslands, or croplands up to four miles from the breeding site. Insects make up the majority of the diet during the breeding season, whereas seeds and grains make up most of the fall and winter diet. Large breeding colonies can be vulnerable to mammalian and

avian predators (Zeiner *et al.*, 1990). This species could potentially nest within 0.5 mile of the RFS.

Western Burrowing Owl (*Athene cunicularia*)

The western burrowing owl is considered a Federal and California species of concern. They are mostly year-round residents of open, dry grasslands and other dry habitats, but some northern range individuals may winter in the south (Zeiner *et al.*, 1990). Though grasslands are their primary habitat, they can also be found in levees and irrigation dikes where ground squirrel burrows provide suitable roosting and nesting cover. Breeding occurs from March through August. Conversion of grasslands to agriculture and poisoning of ground squirrels have been implicated in a reduction of numbers in recent years (Zeiner *et al.*, 1990). Potential nesting habitat for this species occurs in the grasslands around the Delevan Interconnect Site.

Black tern (*Chlidonias niger*)

Black tern is considered a California species of special concern. They occur primarily as a migrant and summer resident in California. Loss of their original wetlands habitat has been replaced by rice fields as a place for these animals to reside (Shuford *et al.*, 2001). Black terns have been observed foraging in the vicinity of the Remote Facility Site and have been known to nest in rice fields.

Northern Harrier (*Circus cyaneus*)

Northern harrier is considered a California species of special concern. Northern harriers nest on the ground in freshwater marsh, grasslands, or grain fields. They hunt by making low flights over open ground, or they hover and dive on prey. They feed primarily on small mammals, birds, frogs, reptiles, and insects. Whereas harriers can be locally abundant where suitable habitat remains intact, loss of wetland habitat and disturbance of breeding areas during the breeding cycle have been cited as reasons for decline (Zeiner *et al.*, 1990). This species could forage in the vicinity of the Remote Facility Site and could nest in wetland areas associated with Gray Lodge and nearby hunting clubs.

White-tailed Kite (*Elanus caeruleus*)

White-tailed kite is a fully protected species in California. They can be common year-round residents in valley lowlands near agricultural areas. White-tailed kites mostly prey on small mammals in open grasslands, farmlands, and emergent wetlands. They typically hover and glide slowly down on prey. Nests are located near the top of oak, willow, or other dense tree stands near open foraging areas. Potential nesting trees are present within 0.5 mile of the Remote Facility Site.

Loggerhead Shrike (*Lanius ludovicianus*)

Loggerhead shrike is considered a California species of concern. They can be found in a variety of plant communities where there are openings and scattered shrubs, trees, or other perches, such as posts or fences. They search for prey, primarily large insects, from low perches, and often

catch prey on barbed wire, thorns, or sharp twigs for later feeding. Nesting usually occurs within dense foliage in trees or shrubs (Zeiner *et al.*, 1990). Loggerhead shrikes have been observed along West Liberty Road near the Remote Facility Site.

White-faced Ibis (*Plegadis chih*)

White-faced ibis is on the California Department of Fish and Game watch list. They are colony-nesting birds that form rookeries in aquatic vegetation, shrubs, or low trees near water or wetlands. They feed in emergent wetland vegetation, wet meadows, shallow waters, pastures, and flooded rice fields. Breeding colonies in California have become rare, likely due to destruction of extensive marsh systems (Zeiner *et al.*, 1990). This species could forage in the vicinity of the Remote Facility Site.

San Joaquin Pocket Mouse (*Perognathus inornatus*)

San Joaquin pocket mouse is considered a California species of concern. They dig burrows in dry grassy or weedy areas where there is fine-textured soil. At the northern extreme of its range, it occurs on rocky south-facing slopes with chamise (*Adenostoma fasciculatum*) and buck brush (*Ceanothus cuneatus*) (Best, 1993). San Joaquin pocket mice are nocturnal, foraging primarily for seeds. Breeding occurs from March to July. Potential habitat occurs in the grasslands around the Delevan Interconnect Site. However, this species was not found during three days of trapping for the Expansion.

4.0 METHODS

4.1 LITERATURE REVIEW

Known locations of sensitive species were obtained from the California Natural Diversity Database (CNDDDB), the California Native Plant Society (CNPS), and the United States Fish and Wildlife Service (USFWS). A total of 41 sensitive species – 19 plant and 22 wildlife species – were identified from these databases as potentially occurring in the portion of the Sacramento Valley in which the Project is located (CDFG, 2008, USFWS, 2008 and CNPS, 2008). This list served as a starting point in determining if there were known locations of sensitive species or whether suitable habitat might actually be found in the project study area and could potentially be affected by the proposed project components. See Attachment A for USFWS Official List of federally protected species, CNDDDB list with sensitive species and complementary CNDDDB maps.

4.2 FIELD RECONNAISSANCE STUDY

A field reconnaissance study was conducted on December 4, 2008 to evaluate the habitats in the Project study areas. Both the Remote Facility Site and the Delevan Interconnect Site were visited. See Attachment B for photos of the project sites.

4.3 BIOLOGICAL SURVEYS

Biological surveys for many of these species were conducted in 2002 and were included in the original Biological Technical Report.

5.0 RESULTS

5.1 PLANT COMMUNITIES

Plant community types in the Project area are divided into natural communities and developed or agricultural categories (see Figure 4). The WGS Project area supports annual grassland, freshwater marsh and agriculture (rice). These plant communities and habitat types are described below.

Freshwater Marsh

At the Remote Facility Site, freshwater marsh occurs mainly in small, isolated patches within drainage ditches associated with rice fields.

Freshwater marsh plant communities are dominated by perennial, emergent monocots to 5 meters tall, often forming completely closed canopies. Sites typically lack significant flow and are permanently flooded by freshwater. Prolonged saturation permits accumulation of deep, peaty soils (Holland, 1996).

This plant community in the project area is dominated by common tule (*Scirpus acutus*) sometimes occurring in monotypic stands.

Open Water

Open water is mainly found in irrigation canals and ditches adjacent to the Remote Facility Site, often in association with freshwater marsh.

Annual Grasslands

Annual grasslands occur west of the Glenn-Colusa Canal to the Delevan Compressor Station. The grasslands near the Delevan Compressor Station are regularly grazed.

Annual grasslands occur on fine-textured, usually clay soils, that are moist or even waterlogged during the winter rainy season and very dry during the summer and fall (Holland, 1986). They are often found adjacent to oak woodlands associated with numerous species of showy, native annual wildflowers (Holland, 1986). Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring (Holland, 1986). With few exceptions, the plants are dead through the summer and fall dry season, persisting as seeds (Holland, 1986).

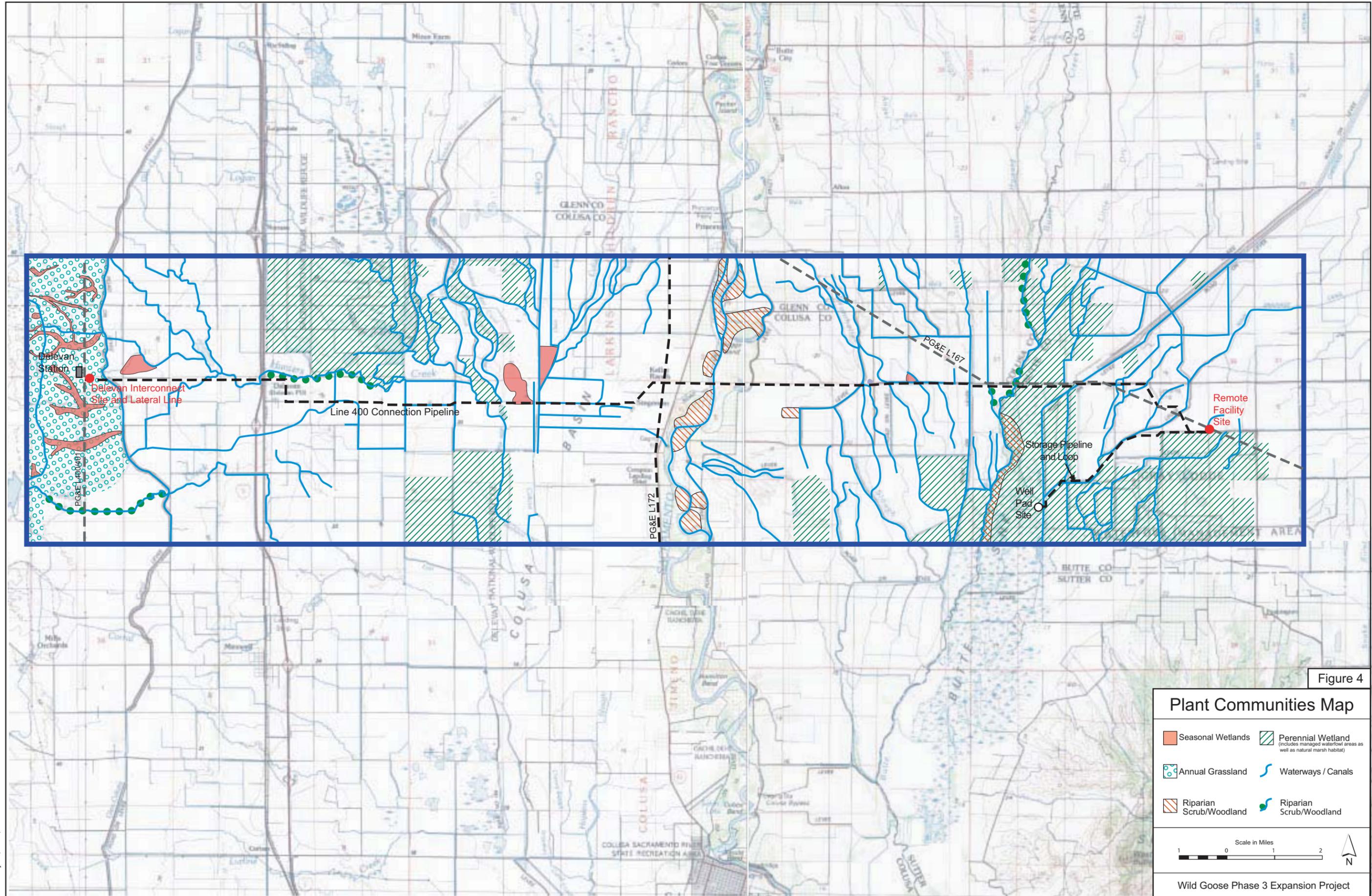
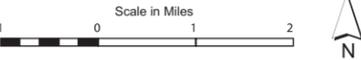


Figure 4

Plant Communities Map

- Seasonal Wetlands
- Perennial Wetland (includes managed waterfowl areas as well as natural marsh habitat)
- Annual Grassland
- Waterways / Canals
- Riparian Scrub/Woodland
- Riparian Scrub/Woodland



Wild Goose Phase 3 Expansion Project

Annual grasslands in the Project area are dominated by Italian ryegrass, soft chess brome (*Bromus hordeaceus*), and barley (*Hordeum* spp.). Other components of these grasslands include wild oat (*Avena barbata*), ripgut brome, Bermuda grass, red brome, yellow star thistle, filaree (*Erodium* sp.), bur-chervil (*Anthriscus caucalis*), and clover (*Trifolium* sp.).

Vernal Pool/Vernal Swale

Vernal pools were identified in the vicinity of the Delevan Interconnect Site. Three low-quality vernal pools were identified in the grassland between the Delevan Interconnect Site and the Glenn-Colusa Canal. These vernal pools are along the road and almost 2000 feet from the Delevan Interconnect Site . The areas were dominated by the following species: Italian ryegrass, Mediterranean barley (*Hordeum marinum*), toad rush (*Juncus bufonius*), and swamp timothy. The entire grassland area, including the vernal pools is subject to cattle grazing. The vernal pool areas appear to suffer more severe impact due to the cattle concentrating around areas of standing water.

General Agriculture

Extensive agriculture fields that are currently in rice production are found throughout the Remote Facility Site.

6.0 POTENTIAL EFFECTS AND RECOMMENDATIONS

The following section summarizes the potential direct and indirect effects of the project on sensitive species and provides recommendations for minimizing effects. Direct and indirect impacts are discussed for each species and the associated critical habitat that may be affected by the Project. These types of impacts are described below. Direct impacts are defined as effects to species or their critical habitat that occur during the implementation of a project. These impacts are likely to result from construction of the project, but are not likely to continue once construction is complete. Indirect impacts are defined as effects that occur to species or their critical habitat after implementation of the project is complete. These effects are caused by or result from project activities and are reasonably certain to occur.

Preconstruction surveys are recommended for a number of sensitive species. These surveys should be conducted in suitable habitat, as identified in Table 1. In addition, the goals for general and species-specific protection measures implemented during construction include:

- no significant adverse change or loss of critical habitat,
- no significant disturbance of special-status species individuals, and
- restoration and natural revegetation of temporarily disturbed surfaces within one growing season.

Protection measures are designed to avoid negatively impacting sensitive species that are in the area during construction. Preconstruction surveys will be conducted for sensitive species. Strategies that will reduce all potential impacts to an insignificant level include:

- avoidance of sensitive species during the breeding or dormancy period,
- utilizing construction techniques that will minimize or avoid impacts,
- preconstruction measures to discourage sensitive species from entering the work area,
- training of construction personnel on sensitive species protection requirements, and
- enhancement of habitat values for giant garter snake excavation sites.

WGS will develop a comprehensive training program to ensure that all Project staff is thoroughly briefed on their environmental responsibilities. The training program includes the following elements:

Management Training

A four-hour management training program at construction start will be held with the environmental team, construction team, lands team, key agency personnel, and contractor management staff. The purpose of this program will be twofold: 1) to provide an overview of the environmental requirements, with presentations on the different resource specialty areas, and 2) to promote cross training and team building

Crew Training

A 30- to 45-minute session will be held for all crews upon arrival to the job site. These sessions will emphasize Project rules and key environmental requirements for the construction workforce. Special-status species identification and responsibilities concerning sensitive species and habitat protection will be discussed at these sessions.

Tailgate Training

Tailgate training will be held in the field as necessary to train crews on particular resources or specific construction methods. Tailgates will often be used when sensitive resources are involved (e.g., giant garter snake) or when specific construction techniques are needed to meet mitigation requirements. Mandatory tailgates will be used as a tool to manage noncompliance incidents.

6.1 PLANTS

Direct Effects

Direct effects to sensitive plants species could occur by clearing and grading activities.

Indirect Effects

Temporary loss of habitat could result due to construction work or staging activities. An indirect effect due to ground-disturbing activities could occur from the introduction of non-native weeds into the project area. Additionally, loss of one season of seed production may result due to the removal of annual plants.

Recommendations

Conduct sensitive plant species surveys prior to construction within suitable habitat and during the appropriate survey window. Establish exclusion zones as necessary. Avoid flowering periods; strip and stockpile topsoil; ensure a post-construction replacement ratio of 1:1 for each plant removed or severely impacted. Limit construction activities in wetlands to the driest periods (approximately early-June through mid-August). Implement Best Management Practices (BMPs), such as equipment cleaning to prevent the introduction of weed into the area.

6.2 INVERTEBRATES

Direct Effects

Direct effects to invertebrate species that may be in the Project area are not expected to occur because WGS has committed to avoiding sensitive habitat (e.g., vernal pools).

Indirect Effects

Due the distance of the Delevan Interconnect Site from vernal pools, indirect effects vernal pool species are not expected.

Recommendations

Install and maintain temporary erosion controls during construction in the grassland areas north of the Glenn-Colusa Canal. Confine vehicles and equipment to the access road that leads to the Delevan Interconnect Site.

6.3 WESTERN SPADEFOOT (*SPEA HAMMONDII*)

Direct Effects

No breeding sites for western spadefoot have been identified in the Project area; therefore, no direct effects are expected to occur.

Indirect Effects

As stated above, no known locations of breeding spadefoot are documented within close proximity of the Project area. Therefore, indirect effects are not expected to occur to this species.

Recommendations

Conduct preconstruction surveys in the grasslands during the breeding season to confirm the presence or absence of this species.

6.4 GIANT GARTER SNAKE (*THAMNOPHIS GIGAS*)

Direct Effects

Direct effects to giant garter snake could occur due to direct mortality of snakes during construction activities, temporary disruption of breeding and foraging, and permanent loss of foraging habitat. Potential foraging habitat in the form of ditches and flooded rice fields occur at the Remote Facility Site. The primary impacts to aquatic habitat will occur as a result of work conducted in rice fields. Approximately 4.5 acres of rice field will be permanently filled as a result of the expansion at the Remote Facility Site.

Indirect Effects

Indirect effects could include loss of foraging, breeding, or hibernation opportunities.

Recommendations

Implement measures for the protection of giant garter snake as described in the Biological Resources Protection Plan and the US Fish and Wildlife Service Biological Opinion that were developed for the) Expansion. Also, in order to avoid impact to the giant garter snake, surface-disturbing activities in potential snake habitat cannot generally occur during the months of October through April while the snake is hibernating. Potential habitat includes all flooded rice fields, wetlands, and both agricultural and natural water bodies. To avoid increased impacts to wetland vegetation and soils in the Butte Sink area, construction should occur during the dry season — typically from early-June through late-August.

6.5 NORTHWESTERN POND TURTLE (*ACTINEMYS MARMORATA MARMORATA*)

Direct Effects

Direct effects to pond turtles may result as direct mortality or loss of breeding locations.

Indirect Effects

Temporary disruption of foraging habitat in the Project area may result due to construction activities adjacent to pond turtle habitat.

Recommendations

Implement measures for the protection of northwestern pond turtle as described in the Biological Resources Protection Plan that was developed for the Expansion. .

This includes performing preconstruction surveys to relocate any pond turtles from harm's way.

6.6 TRICOLORED BLACKBIRD (*AGELAIUS TRICOLOR*)

Direct Effects

Project activities are unlikely to directly affect tricolored blackbirds.

Indirect Effects

No indirect effects to tricolored blackbirds are expected.

Recommendations

Conduct preconstruction surveys to confirm no tricolored blackbirds are nesting in the Project area. Avoid active nest sites until tricolored blackbirds have finished nesting. If nests are found, then establish a minimum 250-foot buffer zone around the nest.

6.7 WESTERN BURROWING OWL (*ATHENE CUNICULARIA*)

Direct Effects

Nesting and foraging burrowing owls may be disturbed during construction activities at the Delevan Interconnect Site.

Indirect Effects

Increased noise and human presence may harass the birds away from nest locations and disrupt foraging behavior.

Recommendations

Conduct preconstruction surveys to confirm that no burrowing owls are nesting or foraging in the Project area. If nests are found, establish a minimum 250-foot buffer zone around the nest until relocation activities are completed (non-breeding season only). Excavate burrows after relocation activities are completed. Replace each burrow excavated with one natural or artificial burrow outside of the 250-foot exclusion zone.

6.8 SWAINSON'S HAWK (*BUTEO SWAINSONI*)

Direct Effects

Nesting and foraging Swainson's hawks may be temporarily disturbed during construction activities. Increased noise and human presence may harass the birds away from nest locations and disrupt foraging behavior. Approximately 0.6 acre of foraging habitat will be lost as a result of expansion at the Delevan Interconnect Site.

Indirect Effects

Indirect effects are not expected to occur to this species.

Recommendations

Implement measures for the protection of Swainson's hawk as described in the Biological Resources Protection Plan that was developed for the Expansion. .

Limit construction activities to outside the time period for breeding and nesting (March 1 to August 1) of the Swainson's hawk. If construction must occur within a half mile of known nesting sites, a qualified biologist will monitor the nest site to ensure that the hawks are not substantially disturbed (i.e., show signs of upset, repeatedly leaving the nest as a result of construction). Halt construction activities if signs of disturbance are indicated.

6.9 BLACK TERN (*CHLIDONIAS NIGER*)

Direct Effects

Nesting is not likely to occur in the Project area. Therefore, direct effects to black terns are not expected to occur as a result of this Project.

Indirect Effects

Black terns have been noted foraging over the rice fields in the Project area. Temporary disruption of rice production may impact the foraging areas utilized by the terns.

Recommendations

Perform preconstruction surveys to confirm no black terns are nesting in the Project area. Avoid active nest sites until terns have finished nesting. If nests are found, then establish a minimum 250-foot buffer zone around the nest.

6.10 NORTHERN HARRIER (*CIRCUS CYANEUS*)

Direct Effects

Northern harriers have been noted foraging over the rice fields in the project area. Temporary disruption of rice production may impact the foraging areas utilized by this species.

Indirect Effects

Permanent loss of foraging habitat will result due to Remote Facility Site expansion.

Recommendations

Conduct preconstruction surveys to determine if any harriers are actively nesting near the project sites. If found, then establish exclusion zones (minimum of 250 feet) around the nesting area until the harriers have successfully fledged their young. Restore foraging and nesting habitat to preconstruction or better conditions.

6.11 WHITE-TAILED KITE (*ELANUS LEUCURUS*)

Direct Effects

Nesting and foraging white-tailed kite may be temporarily disturbed during construction activities. Increased noise and human presence may harass the birds away from nest locations and disrupt foraging behavior. Approximately 0.6 acre of foraging habitat will be lost as a result of the expansion at the Delevan Interconnect Site.

Indirect Effects

Permanent loss of foraging habitat will result due to Delevan Interconnect Site expansion.

Recommendations

Perform preconstruction survey of suitable habitat. If nests are found, then establish a minimum 500-foot buffer zone around the nest.

6.12 LOGGERHEAD SHRIKE (*LANIUS LUDOVICIANUS*)

Direct Effects

Nesting activities are largely completed prior to the open construction window for giant garter snake (May 1). If nesting goes on beyond May 1, then nesting birds near the construction area could avoid or abandon their nest.

Indirect Effects

Permanent loss of foraging habitat may occur due to Remote Facility Site expansion.

Recommendations

Perform preconstruction survey of suitable habitat. If nests are found, then establish a minimum 250-foot buffer zone around the nest.

6.13 WHITE-FACED IBIS (*PLEGADIS CHIHI*)

Direct Effects

Nesting is not likely to occur in the Project area. Therefore, direct effects to white-faced ibis are not expected to occur as a result of this Project.

Indirect Effects

Ibis have been regularly noted as foraging in rice fields, so there may be an indirect effect due to loss of rice fields.

Recommendations

No impacts to this species are expected.

6.14 SAN JOAQUIN POCKET MOUSE (*PEROGNATHUS INORATUS*)

Direct Effects

This species was not found during three days of trapping for the Expansion. Therefore, direct effects to San Joaquin pocket mouse are not expected to occur as a result of this Project.

Indirect Effects

Indirect effects are not expected to occur to this species.

Recommendations

No additional surveys are necessary for this species.

6.15 CUMULATIVE EFFECTS

Impacts to sensitive species will be mitigated during construction using avoidance measures and sensitive construction techniques. All of these effects are expected to be less than significant, and therefore, are not expected cumulatively to adversely affect any sensitive species.

The vast majority of habitat for the giant garter snake impacted by the Project is in the form of flooded rice fields. No wetlands will be disturbed but a small amount of rice field will be permanently lost by the expansion of the Remote Facility Site. The US Fish and Wildlife Service will require that these losses be compensated for by off-site habitat preservation.

Rice production is the dominant agricultural commodity in Colusa County where agriculture makes up 36 percent of the economy. Rice production is similarly important to Butte County, although the economy is heavily influenced by the City of Chico. Consequently, giant garter

snake habitat provided by rice fields is not likely to be cumulatively lost by development forces in the region. Rice fields are more likely lost when they are converted into managed wetlands to add to the recreational hunting and bird watching activities. As wetlands typically provide as good or better habitat for giant garter snake, any cumulative impacts would not be considered significant.

7.0 CONCLUSIONS AND DETERMINATION STATEMENTS

Potential direct effects resulting from this project include species harassment, displacement, or mortality; habitat destruction; or impacted water quality resulting from accidental hazardous material spills, sedimentation, or altered hydrology. Potential indirect effects include loss or degradation of future habitat functionality or impacted water quality resulting from adverse habitat modification causing future sedimentation and/or altered hydrology. Potential adverse impacts to these species and their habitats can be minimized or avoided if project conservation measures are implemented. Implementation of appropriate construction BMPs, restricting work to non-sensitive or designated areas, providing environmental awareness to the crew, and restoring the site appropriately are general measures that will minimize or avoid the negative effects that may be associated with construction of the project. Additional conservation measures that may avoid or minimize adverse affects to potentially occurring special-status species include avoiding sensitive temporal windows for wildlife, conducting appropriate preconstruction surveys for wildlife species in the project action area, checking for wildlife beneath vehicles and equipment in the project area, restricting construction activities to daylight hours where feasible, and having a qualified biologist on-site for construction monitoring. Implementation of these measures will greatly reduce the potential for impact to special-status species and their habitats.

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Attachment A

Official USFWS Species List and CNDDDB Species List and Maps

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: 081217063500
Database Last Updated: September 11, 2008

Quad Lists

Listed Species

Invertebrates

- Branchinecta conservatio*
Conservancy fairy shrimp (E)
- Branchinecta lynchi*
vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus*
valley elderberry longhorn beetle (T)
- Lepidurus packardii*
vernal pool tadpole shrimp (E)

Fish

- Acipenser medirostris*
green sturgeon (T) (NMFS)
- Hypomesus transpacificus*
delta smelt (T)
- Oncorhynchus mykiss*
Central Valley steelhead (T) (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)
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)

Reptiles

- Thamnophis gigas*
giant garter snake (T)

Birds

- Strix occidentalis caurina*

northern spotted owl (T)

Plants

Chamaesyce hooveri

Hoover's spurge (T)

Cordylanthus palmatus

palmate-bracted bird's-beak (E)

Orcuttia pilosa

hairy Orcutt grass (E)

Tuctoria greenei

Greene's tuctoria (=Orcutt grass) (E)

Candidate Species

Birds

Coccyzus americanus occidentalis

Western yellow-billed cuckoo (C)

Quads Containing Listed, Proposed or Candidate Species:

BIGGS (560B)

GRIDLEY (560C)

WEST OF BIGGS (561A)

BUTTE CITY (561B)

SANBORN SLOUGH (561C)

PENNINGTON (561D)

LOGANDALE (562B)

MAXWELL (562C)

LOGAN RIDGE (563A)

SITES (563D)

County Lists

Butte 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)

Lepidurus packardi

Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Oncorhynchus mykiss
Central Valley steelhead (T) (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)

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

Reptiles

Thamnophis gigas
giant garter snake (T)

Plants

Chamaesyce hooveri
Critical habitat, Hoover's spurge (X)
Hoover's spurge (T)

Limnanthes floccosa ssp. californica
Butte County (Shippee) meadowfoam (E)
Critical habitat, Butte County (Shippee) meadowfoam (X)

Orcuttia pilosa
Critical habitat, hairy Orcutt grass (X)
hairy Orcutt grass (E)

Orcuttia tenuis

slender Orcutt grass (T)

Tuctoria greenei

Critical habitat, Greene's tuctoria (=Orcutt grass) (X)

Greene's tuctoria (=Orcutt grass) (E)

Candidate Species

Amphibians

Rana muscosa

mountain yellow-legged frog (C)

Birds

Coccyzus americanus occidentalis

Western yellow-billed cuckoo (C)

Mammals

Martes pennanti

fisher (C)

Colusa County

Listed Species

Invertebrates

Branchinecta conservatio

Conservancy fairy shrimp (E)

Branchinecta lynchi

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Lepidurus packardi

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris

green sturgeon (T) (NMFS)

Oncorhynchus mykiss

Central Valley steelhead (T) (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)

Rana aurora draytonii

- California red-legged frog (T)

Reptiles

Thamnophis gigas

- giant garter snake (T)

Birds

Strix occidentalis caurina

- Critical habitat, northern spotted owl (X)
- northern spotted owl (T)

Plants

Cordylanthus palmatus

- palmate-bracted bird's-beak (E)

Candidate Species

Birds

Coccyzus americanus occidentalis

- Western yellow-billed cuckoo (C)

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](http://www.nmfs.gov). 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 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 March 17, 2009.

Actinemys marmorata marmorata

northwestern pond turtle

Element Code: ARAAD02031

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3G4T3	CDFG Status: SC
State: None	State: S3	

Habitat Associations

General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 95	Map Index: 37803	EO Index: 32810	Dates Last Seen
Occ Rank: Fair			Element: 1997-09-28
Origin: Natural/Native occurrence			Site: 1997-09-28
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1998-01-05

Quad Summary: Pennington (3912137/561D)
County Summary: Butte

Lat/Long: 39.34664° / -121.82592°	Township: 17N
UTM: Zone-10 N4355902 E601169	Range: 01E
Radius: 1/10 mile	Section: 11
Elevation: 65 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: SOUTH OF WEST LIBERTY ROAD, GRAY LODGE WILDLIFE AREA
Ecological: HABITAT CONSISTS OF A SMALL, BACKWATER POND OFF THE 833 CANAL.
Threat: EXOTIC SLIDERS KNOWN FROM THE SAME GENERAL AREA.
General: ALTHOUGH 5 TURTLES WERE OBSERVED FROM A DISTANCE, ONLY ONE OF THOSE WAS CONCLUSIVELY IDENTIFIED (WITHIN 8 FEET) AS A POND TURTLE. SLIDERS HAVE BEEN FOUND IN THE SAME GENERAL AREA.
Owner/Manager: DFG-GRAY LODGE WA

Occurrence No. 166	Map Index: 49532	EO Index: 49532	Dates Last Seen
Occ Rank: Good			Element: 2001-05-22
Origin: Natural/Native occurrence			Site: 2001-05-22
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2002-12-02

Quad Summary: Sanborn Slough (3912138/561C)
County Summary: Butte

Lat/Long: 39.36137° / -121.88599°	Township: 17N
UTM: Zone-10 N4357471 E595973	Range: 01E
Radius: 1/10 mile	Section: 05
Elevation: 60 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: NW
Symbol Type: POINT	

Location: SE OF BUTTE CREEK, IN THE BUTTE SINK AREA, SOUTH SIDE OF GRIDLEY-COLUSA ROAD
Ecological: HABITAT CONSISTS OF A MIX OF RIPARIAN CORRIDORS ALONG BUTTE CREEK AND ASSOCIATED SLOUGHS. BETWEEN THE RIPARIAN AREAS ARE SEASONAL WETLANDS (WET MEADOWS) AND GRASSLANDS.
General: 1 ADULT OBSERVED ON 22 MAY 2001.
Owner/Manager: UNKNOWN

Agelaius tricolor

tricolored blackbird

Element Code: ABPBXB0020

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G2G3	CDFG Status: SC
State: None	State: S2	

_____ Habitat Associations _____

General: HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.
Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

Occurrence No. 387	Map Index: 52975	EO Index: 52975	_____ Dates Last Seen _____
Occ Rank: Unknown			Element: 2003-XX-XX
Origin: Natural/Native occurrence			Site: 2003-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-10-21

Quad Summary: Pennington (3912137/561D)

County Summary: Sutter

Lat/Long: 39.28869° / -121.87120°	Township: 17N
UTM: Zone-10 N4349421 E597347	Range: 01E
Radius: 80 meters	Section: 33
Elevation: 60 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: NW
Symbol Type: POINT	

Location: ALONG NORTH BUTTE ROAD, 0.7 MILE WEST OF WEST BUTTE ROAD, ON THE NW EDGE OF THE SUTTER BUTTES.
Location Detail: LOCATED ~2.5 MILES SSE OF THE WILD GOOSE WELL PAD SITE.
Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES; THIS BLACKBERRY THICKET EXTENDS FOR ~0.5 MILE ALONG NORTH BUTTE ROAD. SURROUNDED BY RICE FARMING, GRAZING, AND GRAY LODGE WILDLIFE MANAGEMENT AREA.
General: ~200 ADULTS OBSERVED AT THIS SITE THROUGHOUT THE 2003 SEASON; NESTING PRESUMED.
Owner/Manager: PVT

Ambystoma californiense

California tiger salamander

Element Code: AAAAA01180

Status	NDDB Element Ranks	Other Lists
Federal: Threatened State: None	Global: G2G3 State: S2S3	CDFG Status: SC

Habitat Associations

General: CENTRAL VALLEY DPS LISTED AS THREATENED. SANTA BARBARA & SONOMA COUNTIES DPS LISTED AS ENDANGERED.

Micro: NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS & VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING

Occurrence No. 85	Map Index: 32389	EO Index: 29329	Dates Last Seen
Occ Rank: None			Element: 1965-11-26
Origin: Natural/Native occurrence			Site: 1965-11-26
Presence: Extirpated			
Trend: Unknown			Record Last Updated: 2001-11-14

Quad Summary: Pennington (3912137/561D)

County Summary: Sutter, Butte

Lat/Long: 39.32186° / -121.81781°	Township: 17N	
UTM: Zone-10 N4353161 E601903	Range: 01E	
Area:	Section: 14	Qtr: XX
Elevation: 65 ft	Mapping Precision: NON-SPECIFIC	Meridian: M
	Symbol Type: POLYGON	

Location: GRAY LODGE WATERFOWL MANAGEMENT AREA.

Location Detail: SPECIMEN OBSERVED BY HAYES AT A SOMEWHAT ALKALINE VERNAL POOL. DATE UNKNOWN. RECORDS FROM THE 1950'S & FROM 1965 FROM THE ENTRANCE STATION & ENTRANCE STATION PARKING LOT.

General: THIS IS THE ONLY KNOWN OCCURRENCE FOR THIS TAXON IN BUTTE COUNTY. JENNINGS CONSIDERS THIS SITE EXTIRPATED.

Owner/Manager: DFG-GRAY LODGE WA

Amsinckia lunaris

bent-flowered fiddleneck

Element Code: PDBOR01070

Status	NDDB Element Ranks	Other Lists
Federal: None State: None	Global: G2 State: S2.2	CNPS List: 1B.2

Habitat Associations

General: CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.
Micro: 50-500M.

Occurrence No. 47	Map Index: 62443	EO Index: 62480	Dates Last Seen
Occ Rank: Unknown			Element: 2003-03-24
Origin: Natural/Native occurrence			Site: 2003-03-24
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2005-08-30

Quad Summary: Lodoga (3912234/563C), Sites (3912233/563D)
County Summary: Colusa

Lat/Long: 39.34777° / -122.37331°	Township: 17N
UTM: Zone-10 N4355558 E553999	Range: 05W
Radius: 1 mile	Section: 12 Qtr: XX
Elevation: 900 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	
Symbol Type: POINT	

Location: VICINITY OF SITES, HILLS NORTH OF THE SITES-LODOGA RD, AND STONE CORRAL CREEK.
Location Detail: EXACT LOCATION(S) UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS BASED UPON ABOVE SITE DESCRIPTION AND T-R-S OF T17N, R5W (NO SECTIONS GIVEN). BOTH SITES AND LODOGA QUADS LISTED BY THE COLLECTORS. ELEVATIONS GIVEN AS: 650-750', 910', AND 1060'.
Ecological: GRASSY SLOPES IN BLUE OAK WOODLAND. CLAY SOILS. SW TO SSE FACING SLOPES. ASSOC WITH CEANOTHUS CUNEATUS, JUNIPERUS CALIFORNICUS, THYSANOCARPUS CURVIPES, LUPINUS BICOLOR, GERANIUM MOLLE, AVENA, LOTUS WRANGELIANUS, L. HUMISTRATUS, ETC.
General: ONLY SOURCES OF INFORMATION FOR THIS OCCURRENCE ARE THREE 2003 COLLECTIONS BY CASTRO & HENDRICKSON. FOUR COLONIES OBSERVED IN 2003. TWO OF THESE HAD 3-12 PLANTS EACH. 50-100 AND 200 PLANTS OBSERVED IN EACH OF THE OTHER COLONIES.
Owner/Manager: UNKNOWN

Astragalus tener var. ferrisiae

Ferris' milk-vetch

Element Code: PDFAB0F8R3

Status	NDDB Element Ranks	Other Lists
Federal: None State: None	Global: G1T1 State: S1.1	CNPS List: 1B.1

Habitat Associations

General: MEADOWS, VALLEY AND FOOTHILL GRASSLAND.

Micro: SUBALKALINE FLATS ON OVERFLOW LAND IN THE CENTRAL VALLEY; USUALLY SEEN IN DRY, ADOBE SOIL. 5-75M.

Occurrence No. 15	Map Index: 53729	EO Index: 53729	Dates Last Seen
Occ Rank: Unknown			Element: 2001-04-15
Origin: Natural/Native occurrence			Site: 2001-04-15
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2005-03-03

Quad Summary: Pennington (3912137/561D)

County Summary: Butte

Lat/Long: 39.33268° / -121.78064°	Township: 17N
UTM: Zone-10 N4354404 E605091	Range: 02E
Radius: 1/10 mile	Section: 17 Qtr: NW
Elevation: 74 ft	Meridian: M

Location: ON THE SOUTH SIDE OF EVANS-REIMER ROAD, ABOUT 1 MILE EAST OF PENNINGTON ROAD, GRAY LODGE WATERFOWL MGMT AREA.
Location Detail: ABOUT 15 FEET SOUTHEAST OF THE LARGE PUMP, ON THE SOUTH SIDE OF EVANS-REIMER ROAD. MAPPED AT THE NORTHWEST CORNER OF SECTION 17.

Ecological: GREATLY DISTURBED VALLEY GRASSLAND AND FRESHWATER MARSH. ON HEAVY DARK CLAY SOIL.

General: ONLY 2 PLANTS SEEN IN 2001. FLOWERS DEEP BLUE.

Owner/Manager: DFG-GRAY LODGE WA

Athene cucularia

burrowing owl

Element Code: ABNSB10010

Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G4 CDFG Status: SC
 State: None State: S2

Habitat Associations

General: OPEN, DRY ANNUAL OR PERENIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.
Micro: SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Occurrence No. 162 Map Index: 23681 EO Index: 7342 Dates Last Seen _____
 Occ Rank: Unknown Element: 2001-XX-XX
 Origin: Natural/Native occurrence Site: 2001-XX-XX
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2002-01-17

Quad Summary: Sites (3912233/563D)
County Summary: Colusa

Lat/Long: 39.36251° / -122.26078° Township: 17N
 UTM: Zone-10 N4357266 E563682 Range: 04W
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 01 Qtr: NW
 Elevation: 140 ft Symbol Type: POINT Meridian: M

Location: 0.3 MILE WEST OF GLENN-COLUSA CANAL, 5.5 MILES NORTH OF MILLS ORCHARDS, EAST OF ANTELOPE VALLEY.
Location Detail: BURROW COMPLEX MADE UP OF 10 HOLES.
Ecological: HABITAT SURROUNDING BURROW COMPLEX CONSISTS OF AGRICULTURAL FIELDS.
General: ONE DROPPING OBSERVED AND ONE OWL FLUSHED IN THE BURROW COMPLEX ON 5 MAR 1992. ACTIVE DURING SPRING 2001.
Owner/Manager: UNKNOWN

Occurrence No. 163 Map Index: 23682 EO Index: 7341 Dates Last Seen _____
 Occ Rank: Unknown Element: 1992-XX-XX
 Origin: Natural/Native occurrence Site: 1992-03-05
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1993-07-20

Quad Summary: Sites (3912233/563D)
County Summary: Colusa

Lat/Long: 39.33677° / -122.26199° Township: 17N
 UTM: Zone-10 N4354409 E563601 Range: 04W
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 12 Qtr: SW
 Elevation: 160 ft Symbol Type: POINT Meridian: M

Location: 3 MILES EAST OF "GOLDEN GATE" ON FUNKS CREEK, EAST OF ANTELOPE VALLEY.
Location Detail: BURROW LOCATED NEAR THE TOP OF A SMALL HILL.
General: NOW OWL OBSERVED, BUT 3 CASTINGS AND SOME DROPPINGS WERE FOUND; SIGN APPEARED RECENT, BUT NOT FRESH.
Owner/Manager: UNKNOWN

Occurrence No. 430 Map Index: 47030 EO Index: 47030 Dates Last Seen _____
 Occ Rank: Good Element: 2001-05-10
 Origin: Natural/Native occurrence Site: 2001-05-10
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2002-01-17

Quad Summary: Sites (3912233/563D)
County Summary: Colusa

Lat/Long: 39.37135° / -122.27323° Township: 18N
 UTM: Zone-10 N4358239 E562602 Range: 04W
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 35 Qtr: NE
 Elevation: 190 ft Symbol Type: POINT Meridian: M

Location: 1 MILE WEST OF GLENN-COLUSA CANAL, 7.5 MILES NNW OF MAXWELL.
Location Detail: LOCATED JUST WEST OF THE PG&E COMPRESSOR STATION.
Ecological: HABITAT CONSISTS OF ROLLING HILLS WITH ANNUAL GRASSLAND, AT A TRANSITION AREA BETWEEN VALLEY FLOOR AND LOW COAST RANGE FOOTHILLS; DOMINANT PLANTS INCLUDE CENTAUREA SOLSTIALIS, TAENIATHERUM CAPUT-MEDUSAE, BROMUS DIANDRUS, ERODIUM BOTRYS.
Threat: THREATENED BY DEVELOPMENT OF A PROPOSED POWER PLANT.
General: 2 ADULTS OBSERVED AT THE BURROW SITE ON 10 MAY 2001.
Owner/Manager: UNKNOWN

Atriplex cordulata

heartscale

Element Code: PDCHE040B0

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G2?	CNPS List: 1B.2
State: None	State: S2.2?	

_____ Habitat Associations _____

General: CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND, MEADOWS.
 Micro: ALKALINE FLATS AND SCALDS IN THE CENTRAL VALLEY, SANDY SOILS. 1-150(600)M.

Occurrence No. 2	Map Index: 24346	EO Index: 26915	_____ Dates Last Seen _____
Occ Rank: Good			Element: 1993-07-29
Origin: Natural/Native occurrence			Site: 1993-07-29
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2005-09-20

Quad Summary: Pennington (3912137/561D)
 County Summary: Butte

Lat/Long: 39.32086° / -121.83131°	Township: 17N
UTM: Zone-10 N4353035 E600741	Range: 01E
Radius: 80 meters	Section: 14
Elevation: 65 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: SW
Symbol Type: POINT	

Location: 0.1 MILE SE OF THE HEADQUARTERS FOR GRAY LODGE WILDLIFE AREA, SOUTH SIDE OF RUTHERFORD RD, WEST SIDE OF LEVEE RD.
 Ecological: GROWING ON BARE, DRY, ALKALI SOIL WITH ATRIPLEX DEPRESSA.
 General: 10 PLANTS OBSERVED IN 1982 BY AHART.
 Owner/Manager: DFG-GRAY LODGE WA

Occurrence No. 3	Map Index: 25629	EO Index: 25663	_____ Dates Last Seen _____
Occ Rank: Good			Element: 1993-07-29
Origin: Natural/Native occurrence			Site: 1993-07-29
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2005-09-20

Quad Summary: Pennington (3912137/561D)
 County Summary: Butte

Lat/Long: 39.31727° / -121.80881°	Township: 17N
UTM: Zone-10 N4352661 E602686	Range: 01E
Radius: 80 meters	Section: 24
Elevation: 70 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: NW
Symbol Type: POINT	

Location: GRAY LODGE WILDLIFE AREA; 2 MILES SE OF THE HEADQUARTERS BUILDINGS. JUST SOUTH OF RUTHERFORD RD, WEST OF LEVEE RD.
 Location Detail: 100 FEET SOUTH OF PARKING LOT 5 ON RUTHERFORD RD.
 Ecological: BARE PATCHES IN HARD, DRY, ALKALI CLAY WITH ATRIPLEX DEPRESSA, AND A. MINUSCULA.
 Threat: SITE IS MANAGED FOR MIGRATORY WATERFOWL & UPLAND HUNTING.
 General: PRESENCE NOTED AS "LOCALLY COMMON" IN 1993.
 Owner/Manager: DFG-GRAY LODGE WA

Occurrence No. 40	Map Index: 25374	EO Index: 5898	_____ Dates Last Seen _____
Occ Rank: Unknown			Element: 1920-07-12
Origin: Natural/Native occurrence			Site: 1920-07-12
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1994-02-15

Quad Summary: Logandale (3912242/562B)
 County Summary: Glenn

Lat/Long: 39.42547° / -122.19273°	Township: 18N
UTM: Zone-10 N4364304 E569482	Range: 03W
Radius: 1 mile	Section: 10
Elevation: 95 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: NORTH OF NORMAN.
 Location Detail: MAPPED BETWEEN NORMAN AND LOGANDALE.
 General: SCARCE. ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1920 COLLECTION BY HALL. AREA SHOULD BE FIELD CHECKED FOR PRESENCE OF SUITABLE HABITAT.
 Owner/Manager: UNKNOWN

Atriplex cordulata

heartscale

Element Code: PDCHE040B0

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G2? CNPS List: 1B.2
 State: None State: S2.2?

_____ Habitat Associations _____

General: CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND, MEADOWS.
 Micro: ALKALINE FLATS AND SCALDS IN THE CENTRAL VALLEY, SANDY SOILS. 1-150(600)M.

Occurrence No. 58 Map Index: 32955 EO Index: 804 _____ Dates Last Seen _____
 Occ Rank: Unknown Element: 1994-XX-XX
 Origin: Natural/Native occurrence Site: 1994-XX-XX
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1996-02-28

Quad Summary: Logandale (3912242/562B)
 County Summary: Glenn

Lat/Long: 39.40469° / -122.18286° Township: 18N
 UTM: Zone-10 N4362005 E570353 Range: 03W
 Area: 13.5 acres Mapping Precision: SPECIFIC Section: 22 Qtr: NW
 Elevation: 85 ft Symbol Type: POLYGON Meridian: M

Location: SACRAMENTO NATIONAL WILDLIFE REFUGE; 0.5 MI SE OF JCT NORMAN ROAD AND SOUTHERN PACIFIC RAILROAD.
 Location Detail: ON BOTH SIDES OF ROAD. IN BOTH NW1/4 AND NE1/4 OF SECTION 22.

Owner/manager: USFWS-SACRAMENTO NWR

Atriplex depressa

brittlescale

Element Code: PDCHE042L0

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G2Q CNPS List: 1B.2
 State: None State: S2.2

Habitat Associations

General: CHENOPOD SCRUB, MEADOWS, PLAYAS, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.
 Micro: USUALLY IN ALKALI SCALDS OR ALK. CLAY IN MEADOWS OR ANNUAL GRASSLAND; RARELY ASSOC W/RIPARIAN, MARSHES, OR V.P'S. 1-320M.

Occurrence No. 11 Map Index: 21171 EO Index: 156 Dates Last Seen _____
 Occ Rank: Unknown Element: 1920-07-13
 Origin: Natural/Native occurrence Site: 1920-07-13
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2005-09-23

Quad Summary: Logandale (3912242/562B)
 County Summary: Glenn

Lat/Long: 39.40737° / -122.19144° Township: 18N
 UTM: Zone-10 N4362296 E569611 Range: 03W
 Radius: 3/5 mile Mapping PrecisionNON-SPECIFIC Section: 15 Qtr: XX
 Elevation: 90 ft Symbol Type:POINT Meridian: M

Location: VICINITY OF NORMAN. 2 COLLECTIONS: W OF NORMAN AND JUST E OF TOWN.
 Location Detail: EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB CENTERED ON NORMAN.
 Ecological: ALKALI FLATS WITH A. FRUTICULOSA AND DISTICHLIS SPICATA.
 Owner/Manager: UNKNOWN

Occurrence No. 71 Map Index: 62710 EO Index: 62747 Dates Last Seen _____
 Occ Rank: Unknown Element: 2000-07-19
 Origin: Natural/Native occurrence Site: 2000-07-19
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2005-09-26

Quad Summary: Sites (3912233/563D), Maxwell (3912232/562C)
 County Summary: Colusa

Lat/Long: 39.32257° / -122.26589° Township: 17N
 UTM: Zone-10 N4352831 E563278 Range: 04W
 Radius: 1 mile Mapping PrecisionNON-SPECIFIC Section: 13 Qtr: XX
 Elevation: 145 ft Symbol Type:POINT Meridian: M

Location: VICINITY OF MAXWELL, FUNKS CREEK, & THE GLENN-COLUSA CANAL.
 Location Detail: ON LOW TERRACE BESIDE SOUTH EDGE OF SHALLOW INTERMITTENT STREAM CHANNEL DRAINING EASTWARD OUT OF THE HILLS EAST OF GOLDEN GATE. EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS.
 Ecological: IN ALKALINE / SALINE DRIED CLAY SOIL OF WEAK "ALKALI SCALDS" WITH DISTICHLIS SPICATA. LOW, FLAT AREAS WITH SMALL STONES ON SURFACE, PROBABLY VERNALLY MOIST & COLLECTING MORE MOISTURE THAN MORE RAISED SURROUNDINGS WHICH HAVE A. FRUTICULOSA.
 General: PRESENCE NOTED AS "UNCOMMON BUT SCATTERED" IN 2000. LOCATION INFO IS VERY VAGUE. OCCURRENCE MAY BE OUTSIDE OF THE MAPPED CIRCLE. ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 2000 COLLECTION BY CASTRO & KUENSTER. NEEDS FIELDWORK.
 Owner/Manager: UNKNOWN

Atriplex joaquiniana

San Joaquin spearscale

Element Code: PDCHE041F3

Status: _____ NDDB Element Ranks: _____ Other Lists: _____
 Federal: None Global: G2 CNPS List: 1B.2
 State: None State: S2.1

Habitat Associations

General: CHENOPOD SCRUB, ALKALI MEADOW, VALLEY AND FOOTHILL GRASSLAND.
 Micro: IN SEASONAL ALKALI WETLANDS OR ALKALI SINK SCRUB WITH DISTICHLIS SPICATA, FRANKENIA, ETC. 1-250M.

Occurrence No. 67 Map Index: 49797 EO Index: 49797 Dates Last Seen: _____
 Occ Rank: Unknown Element: 1920-07-12
 Origin: Natural/Native occurrence Site: 1920-07-12
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2003-01-07

Quad Summary: Logandale (3912242/562B)
 County Summary: Glenn

Lat/Long: 39.40716° / -122.21783° Township: 18N
 UTM: Zone-10 N4362253 E567340 Range: 03W
 Radius: 1 mile Mapping Precision: NON-SPECIFIC Section: 17 Qtr: XX
 Elevation: Symbol Type: POINT Meridian: M

Location: WEST OF NORMAN.
 Location Detail: LOCATION MAPPED WEST OF NORMAN ALONG MAIN ROAD.
 Ecological: WITHIN WET SWALE WITH TISSA.
 General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1920 COLLECTION BY HALL. NEEDS FIELDWORK.
 Owner/Manager: UNKNOWN

Occurrence No. 79 Map Index: 62710 EO Index: 62784 Dates Last Seen: _____
 Occ Rank: Unknown Element: 2000-07-19
 Origin: Natural/Native occurrence Site: 2000-07-19
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2005-09-28

Quad Summary: Sites (3912233/563D), Maxwell (3912232/562C)
 County Summary: Colusa

Lat/Long: 39.32257° / -122.26589° Township: 17N
 UTM: Zone-10 N4352831 E563278 Range: 04W
 Radius: 1 mile Mapping Precision: NON-SPECIFIC Section: 13 Qtr: XX
 Elevation: 145 ft Symbol Type: POINT Meridian: M

Location: VICINITY OF FUNKS CREEK & THE GLENN-COLUSA CANAL.
 Location Detail: BESIDE SOUTH EDGE OF SHALLOW EPHEMERAL STREAM CHANNEL DRAINING EASTWARD OUT OF THE HILLS EAST OF GOLDEN GATE. EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS.
 Ecological: ALKALINE / SALINE DRIED CLAY SOIL OF WEAK ALKALI SCALDS ALONG A COWPATH. ASSOC WITH FRANKENIA SALINA, ATRIPLEX DEPRESSA, A. FRUTICULOSA, HEMIZONIA PARRYI, HORDEUM MARINUM, BROMUS HORDEACEUS, AND LOLIUM.
 Threat: TRAMPLING BY CATTLE.
 General: VERY UNCOMMON AT SITE IN 2000. A FEW SCATTERED PLANTS OBSERVED IN 2002. ONLY SOURCES OF INFORMATION FOR THIS OCCURRENCE ARE A 2000 COLLECTION BY CASTRO & KUENSTER AND A 2002 COLLECTION BY JANEWAY. NEEDS FIELDWORK.
 Owner/Manager: UNKNOWN

Atriplex minuscula

lesser saltscale

Element Code: PDCHE042M0

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G1 CNPS List: 1B.1
 State: None State: S1.1

Habitat Associations

General: CHENOPOD SCRUB, PLAYAS, VALLEY AND FOOTHILL GRASSLAND.
 Micro: IN ALKALI SINK AND GRASSLAND IN SANDY, ALKALINE SOILS. 20-100M.

Occurrence No. 7 Map Index: 25629 EO Index: 3527 Dates Last Seen _____
 Occ Rank: Good Element: 1998-09-11
 Origin: Natural/Native occurrence Site: 1998-09-11
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2004-09-08

Quad Summary: Pennington (3912137/561D)
 County Summary: Butte

Lat/Long: 39.31727° / -121.80881° Township: 17N
 UTM: Zone-10 N4352661 E602686 Range: 01E
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 24 Qtr: NW
 Elevation: 70 ft Symbol Type: POINT Meridian: M

Location: GRAY LODGE WILDLIFE AREA; JUST S OF RUTHERFORD RD, W OF LEVEE RD.
 Location Detail: 100 FT S OF PARKING LOT 5 ON RUTHERFORD RD.
 Ecological: SCATTERED PLANTS IN SMALL BARE PATCHES OF HARD DRY ALKALI CLAY. WITH ATRIPLEX DEPRESSA AND A. CORDULATA.
 Threat: SITE MANAGED FOR MIGRATORY WATERFOWL AND UPLAND HUNTING.
 General: 20 PLANTS IN 1993. PRESTON VISITED THIS SITE IN 1998.
 Owner/Manager: DFG-GRAY LODGE WA

Occurrence No. 31 Map Index: 24346 EO Index: 56519 Dates Last Seen _____
 Occ Rank: Good Element: 1993-07-29
 Origin: Natural/Native occurrence Site: 1993-07-29
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2004-08-26

Quad Summary: Pennington (3912137/561D)
 County Summary: Butte

Lat/Long: 39.32086° / -121.83131° Township: 17N
 UTM: Zone-10 N4353035 E600741 Range: 01E
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 14 Qtr: SW
 Elevation: 65 ft Symbol Type: POINT Meridian: M

Location: GRAY LODGE WILDLIFE AREA, W SIDE OF LEVEE ROAD, S SIDE OF RUTHERFORD ROAD.
 Location Detail: JUST E OF THE HEADQUARTERS COMPLEX.
 Ecological: BARE PATCHES OF HARD DRY ALKALINE CLAY IN WEEDY FIELD WITH ATRIPLEX CORDULATA.
 Threat: SITE MANAGED FOR MIGRATORY WATERFOWL AND UPLAND HUNTING.
 General: ORIGINALLY IDENTIFIED AS ATRIPLEX DEPRESSA; DETERMINED TO BE A. MINUSCULA BY PRESTON. FORMER A. DEPRESSA OCCURRENCE # 40.
 Owner/Manager: DFG-GRAY LODGE WA

Atriplex persistens

vernal pool smallscale

Element Code: PDCHE042P0

Status	NDDB Element Ranks	Other Lists
Federal: None State: None	Global: G2 State: S2.2	CNPS List: 1B.2

Habitat Associations
 General: VERNAL POOLS.
 Micro: ALKALINE VERNAL POOLS. 10-115M.

Occurrence No. 13	Map Index: 36789	EO Index: 31786	Dates Last Seen
Occ Rank: Unknown			Element: 1992-XX-XX
Origin: Natural/Native occurrence			Site: 1992-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1997-09-19

Quad Summary: Logandale (3912242/562B)
County Summary: Glenn

Lat/Long: 39.38655° / -122.18167°	Township: 18N
UTM: Zone-10 N4359993 E570473	Range: 03W
Radius: 80 meters	Section: 27
Elevation: 85 ft	Meridian: M
Mapping Precision: SPECIFIC	Qtr: NE
Symbol Type: POINT	

Location: SACRAMENTO NWR, ABOUT 3 MILES SOUTH OF REFUGE HEADQUARTERS, JUST NORTH OF COUNTY LINE.
Location Detail: MAPPED WITHIN THE SOUTHWEST PORTION OF REFUGE AREA T31. SW1/4 OF NE1/4 OF SECTION 27.
Ecological: GROWING IN ALKALINE SOIL ON THE DRY BEDS OF VERNAL POOLS.
General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS "A FLORA OF THE SACRAMENTO NATIONAL WILDLIFE REFUGE" BY OSWALD AND SILVEIRA (1995).
Owner/Manager: USFWS-SACRAMENTO NWR

Atriplex subtilis

subtile orache

Element Code: PDCHE042T0

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G2	CNPS List: 1B.2
State: None	State: S2.2	

Habitat Associations

General: VALLEY AND FOOTHILL GRASSLAND.

Micro: LITTLE INFO AVAILABLE. MADRONO VOL. 44 NO.2 ONLY SOURCE CURRENTLY. 40-100M.

Occurrence No.: 20	Map Index: 25629	EO Index: 56547	Dates Last Seen
Occ Rank: Good			Element: 1998-09-11
Origin: Natural/Native occurrence			Site: 1998-09-11
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2004-08-30

Quad Summary: Pennington (3912137/561D)

County Summary: Butte

Lat/Long: 39.31727° / -121.80881°	Township: 17N
UTM: Zone-10 N4352661 E602686	Range: 01E
Radius: 80 meters	Section: 24 Qtr: NW
Elevation: 70 ft	Meridian: M
Mapping Precision: SPECIFIC	
Symbol Type: POINT	

Location: GRAY LODGE WILDLIFE AREA; JUST S OF RUTHERFORD RD, W OF LEVEE RD.

Location Detail: 100 FT S OF PARKING LOT 5 ON RUTHERFORD RD. NE1/4 OF NW1/4 SEC 24.

Ecological: SCATTERED PLANTS IN SMALL BARE PATCHES OF HARD DRY ALKALI CLAY. WITH ATRIPLEX DEPRESSA AND A. CORDULATA. COMMON ASSOCIATES INCLUDE DISTICHLIS SPICATA, HEMIZONIA PUNGENS, CRESSA TRUXILLENIS, ETC.

Threat: SITE MANAGED FOR MIGRATORY WATERFOWL AND UPLAND HUNTING.

General: 20 PLANTS IN 1993. 20-30 PLANTS SEEN BY PRESTON IN 1998. ORIGINALLY IDENTIFIED AS A. MINUSCULA; IDENTIFIED AS A. SUBTILIS BY PRESTON. FORMER A. MINUSCULA OCCURRENCE #7.

Owner/Manager: DFG-GRAY LODGE WA

Branchinecta conservatio

Conservancy fairy shrimp

Element Code: ICBRA03010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered State: None	Global: G1 State: S1	CDFG Status:

Habitat Associations

General: ENDEMIC TO THE GRASSLANDS OF THE NORTHERN TWO-THIRDS OF THE CENTRAL VALLEY; FOUND IN LARGE, TURBID POOLS.
Micro: INHABIT ASTATIC POOLS LOCATED IN SWALES FORMED BY OLD, BRAIDED ALLUVIUM; FILLED BY WINTER/SPRING RAINS, LAST UNTIL JUNE.

Occurrence No.: 13	Map Index: 41873	EO Index: 41873	Dates Last Seen
Occ Rank: Unknown			Element: 1994-03-03
Origin: Natural/Native occurrence			Site: 1994-03-03
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1999-11-10

Quad Summary: Logandale (3912242/562B)

County Summary: Glenn

Lat/Long: 39.38707° / -122.18045°	Township: 18N
UTM: Zone-10 N4360052 E570578	Range: 03W
Area:	Section: 27 Qtr: NE
Elevation: 85 ft	Meridian: M

Location: 1.5 MILES SSE OF NORMAN, 0.6 MILE EAST OF I-5, SACRAMENTO NATIONAL WILDLIFE REFUGE, NORTH OF GLENN/COLUSA COUNTY LINE.

Location Detail: VERNAL POOL IN THE SW 1/4 OF THE NE 1/4 OF SECTION 27. D. BELK ACCESSION #S DB1107 & DB1163

Ecological: VERNAL POOL

General: UNKNOWN NUMBER COLLECTED IN 1 FEB 1993 AND 3 MAR 1994.

Owner/Manager: USFWS-SACRAMENTO NWR

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G5 CDFG Status:
 State: Threatened State: S2

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH
 Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 54 Map Index: 10641 EO Index: 27238 Dates Last Seen _____
 Occ Rank: Unknown Element: 1979-07-24
 Origin: Natural/Native occurrence Site: 1979-07-24
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1989-08-10

Quad Summary: Pennington (3912137/561D)
 County Summary: Butte

Lat/Long: 39.35960° / -121.83054° Township: 17N
 UTM: Zone-10 N4357335 E600752 Range: 01E
 Radius: 1 mile Mapping PrecisionNON-SPECIFIC Section: 02 Qtr: NW
 Elevation: 65 ft Symbol Type:POINT Meridian: M

Location: SOUTH SIDE GRIDLEY ROAD
 General: DFG SWHA #BU001. ONE ADULT OBSERVED IN 1979; NO NEST FOUND. BLOOM/SCHLORFF
 Owner/Manager: PVT

Occurrence No. 280 Map Index: 10489 EO Index: 27033 Dates Last Seen _____
 Occ Rank: Unknown Element: 1985-07-15
 Origin: Natural/Native occurrence Site: 1985-07-15
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1995-10-27

Quad Summary: Butte City (3912148/561B), West of Biggs (3912147/561A)
 County Summary: Butte, Glenn

Lat/Long: 39.40599° / -121.88859° Township: 18N
 UTM: Zone-10 N4362420 E595687 Range: 01E
 Radius: 1 mile Mapping PrecisionNON-SPECIFIC Section: 17 Qtr: SW
 Elevation: 65 ft Symbol Type:POINT Meridian: M

Location: HOODOO ISLAND, E SIDE OF BUTTE CREEK, 1 MI BELOW BIGGS-AFTON ROAD.
 Location Detail: INCL NW OF SEC 20.
 Ecological: VALLEY OAK WOODLAND HABITAT.
 Threat: LAND SUBJECT TO FLOODING FOR DUCK PONDS AND FIRE FROM AG BURNING.
 General: ONE LIGHT PHASE HAWK OBS. NESTING PROBABLE.
 Owner/Manager: PVT

Occurrence No. 878 Map Index: 43675 EO Index: 43675 Dates Last Seen _____
 Occ Rank: Fair Element: 2000-07-08
 Origin: Natural/Native occurrence Site: 2000-07-08
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2000-08-30

Quad Summary: Maxwell (3912232/562C)
 County Summary: Colusa

Lat/Long: 39.33719° / -122.19174° Township: 17N
 UTM: Zone-10 N4354507 E569655 Range: 03W
 Radius: 80 meters Mapping PrecisionSPECIFIC Section: 09 Qtr: SW
 Elevation: 100 ft Symbol Type:POINT Meridian: M

Location: ALONG HIGHWAY 99W, 0.2 MILE NORTH OF LENAHA ROAD, SOUTH OF DELEVAN.
 Location Detail: BLACK WALNUTS LINE BOTH ROAD SHOULDERS.
 General: NESTING ACTIVITY OBSERVED FROM 20 APR-8 JUL 2000 (7 VISITS); 1 CHICK OBSERVED ON 26 JUN 2000, 1 YOUNG FLEDGED.
 Owner/Manager: COL COUNTY

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G5 CDFG Status:
 State: Threatened State: S2

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH
 Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 880 Map Index: 43678 EO Index: 43678 Dates Last Seen _____
 Occ Rank: Poor Element: 2000-07-08
 Origin: Natural/Native occurrence Site: 2000-07-08
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2000-08-30

Quad Summary: Maxwell (3912232/562C)
 County Summary: Colusa

Lat/Long: 39.35847° / -122.19239° Township: 17N
 UTM: Zone-10 N4356868 E569578 Range: 03W
 Radius: 80 meters Mapping Precision SPECIFIC Section: 04 Qtr: NW
 Elevation: 85 ft Symbol Type: POINT Meridian: M

Location: 0.15 MILE NORTH OF LORETZ ROAD, BETWEEN HIGHWAY 99W AND I-5, JUST NORTH OF THE VILLAGE OF DELEVAN.

Location Detail: NEST TREE IS THE LARGEST AND MOST NORTHERN OF SEVERAL SMALL, RAGGED WILLOWS.

Ecological: NEST TREE IS A WILLOW; NEST IS VERY SMALL AND RAGGED.

General: NESTING ACTIVITY OBSERVED FROM 26 JUN-08 JUL 2000 (6 VISITS); NO CHICKS OBSERVED/FLEDGED.

Owner/Manager: CALTRANS

Occurrence No. 898 Map Index: 43709 EO Index: 43709 Dates Last Seen _____
 Occ Rank: Good Element: 2000-07-22
 Origin: Natural/Native occurrence Site: 2000-07-22
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2000-09-05

Quad Summary: Maxwell (3912232/562C)
 County Summary: Colusa

Lat/Long: 39.33242° / -122.21385° Township: 17N
 UTM: Zone-10 N4353961 E567754 Range: 03W
 Radius: 1/5 mile Mapping Precision NON-SPECIFIC Section: 17 Qtr: NE
 Elevation: 110 ft Symbol Type: POINT Meridian: M

Location: LENAHAN ROAD, 0.2 MILE WEST OF SUTTON ROAD, 3.5 MILES NNW OF MAXWELL.

Location Detail: PRESUMED NEST LOCATED SOMEWHERE WITHIN A NORTH-SOUTH ROW OF OLD, COLUMNAR COTTONWOODS, WHOSE SHAPE REFLECTS EXTENSIVE PRUNING OF SUBTRUNKS.

Ecological: NEST TREE IS PRESUMABLY A COTTONWOOD; SURROUNDED BY ONIONS TO THE NORTH AND SOUTH, SUNFLOWERS EAST OF THE MOST SOUTHERN TREES, AND WALNUTS EAST OF THE MOST NORTHERN TREES.

General: ALTHOUGH NEST WAS NOT FOUND, NESTING ACTIVITY WAS OBSERVED BETWEEN 19 APR-22 JUL 2000; 3 YOUNG FLEDGED.

Owner/Manager: PVT?

Occurrence No. 924 Map Index: 43809 EO Index: 43809 Dates Last Seen _____
 Occ Rank: Fair Element: 2003-06-18
 Origin: Natural/Native occurrence Site: 2003-06-18
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2003-09-09

Quad Summary: Maxwell (3912232/562C)
 County Summary: Colusa

Lat/Long: 39.34416° / -122.19202° Township: 17N
 UTM: Zone-10 N4355281 E569624 Range: 03W
 Area: 15.3 acres Mapping Precision SPECIFIC Section: 09 Qtr: NE
 Elevation: 100 ft Symbol Type: POLYGON Meridian: M

Location: WEST SIDE OF ROAD 99W, 0.25 - 0.40 MILE SOUTH OF DELEVAN ROAD, NORTH OF MAXWELL

Location Detail: 2000 NEST WAS LOCATED AT THE 90% HEIGHT OF THE SECOND SYCAMORE ON THE WEST ROAD SHOULDER NORTH OF THE NORTH DRIVEWAY OF FARMSTEAD #4789. 2003 NEST WAS LOCATED 0.15 MILE NORTH OF THE 2000 NEST TREE.

Ecological: NEST TREE IS A SYCAMORE; SURROUNDED BY ROADSIDE WEEDS TO THE WEST, AGRICULTURAL BUSINESS TO THE NORTH, AND RICE FIELDS TO THE SOUTH AND EAST.

General: ADULT OBSERVED DEFENDING THE NEST ON 8 AUG 2000. 2003 NEST OBSERVED THROUGH INCUBATION/HATCHING; PRESENCE OF ONE CHICK CONFIRMED THROUGH NEAR-FLEDGING STAGE OF DEVELOPMENT (FLEDGING NOT CONFIRMED).

Owner/Manager: PVT

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status _____ **NDDB Element Ranks** _____ **Other Lists** _____
Federal: None **Global:** G5 **CDFG Status:**
State: Threatened **State:** S2

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 925 **Map Index:** 43810 **EO Index:** 43810 **Dates Last Seen** _____
Occ Rank: Fair **Element:** 2003-06-30
Origin: Natural/Native occurrence **Site:** 2003-06-30
Presence: Presumed Extant
Trend: Unknown **Record Last Updated:** 2003-09-09

Quad Summary: Logandale (3912242/562B)
County Summary: Glenn

Lat/Long: 39.39305° / -122.19177° **Township:** 18N
UTM: Zone-10 N4360707 E569597 **Range:** 03W
Radius: 80 meters **Mapping Precision:** SPECIFIC **Section:** 22 **Qtr:** SW
Elevation: 85 ft **Symbol Type:** POINT **Meridian:** M

Location: EAST SIDE OF ROAD 99W, 0.5 MILE NORTH OF THE GLENN COUNTY LINE, NORTH OF MAXWELL.
Location Detail: NEST TREE IS A WILLOW LOCATED EAST OF THE RAILROAD TRACKS; NEST IS LOCATED AT 80% HEIGHT OF THE NEST TREE.
Ecological: NEST TREE IS A WILLOW, THE TALLEST IN ITS IMMEDIATE VICINITY; SURROUNDED BY HIGHWAYS AND RICE FARMING.
General: NESTING ACTIVITY OBSERVED BETWEEN 26 JUN-27 JUL 2000; 1 CHICK OBSERVED ON 26 JUN 2000, AT LEAST 1 FLEDGLING; 2 FLEDGLINGS OBSERVED JUST NORTH OF THIS SITE AFTER FLEDGING OCCURRED. PAIR OBSERVED INCUBATING ON 30 JUN 2003.
Owner/Manager: UNKNOWN

Occurrence No. 1002 **Map Index:** 50651 **EO Index:** 50651 **Dates Last Seen** _____
Occ Rank: Fair **Element:** 2003-06-03
Origin: Natural/Native occurrence **Site:** 2003-06-03
Presence: Presumed Extant
Trend: Unknown **Record Last Updated:** 2003-09-09

Quad Summary: Maxwell (3912232/562C)
County Summary: Colusa

Lat/Long: 39.35693° / -122.18809° **Township:** 17N
UTM: Zone-10 N4356701 E569950 **Range:** 03W
Area: **Mapping Precision:** NON-SPECIFIC **Section:** 03 **Qtr:** XX
Elevation: 90 ft **Symbol Type:** POLYGON **Meridian:** M

Location: NORTH OF LORTEZ ROAD AND EAST OF HIGHWAY 99, 0.6 MILE NORTH OF DELEVAN ROAD, IN THE COMMUNITY OF DELEVAN
Ecological: NEST TREE IS IN A RESIDENTIAL AREA, SURROUNDED BY RICE FIELDS.
General: 1 ADULT OBSERVED ON NEST ON 25 MAY 2001. PAIR ARRIVED ON THE TERRITORY IN LATE APR 2003; NORMAL BEHAVIOR DURING NEST REFURBISHMENT/INCUBATION. FIRST NEST FAILED DUE TO CORVID PREDATION; NEW NEST BUILT 500' WEST OF FIRST NEST.
Owner/Manager: PVT

Occurrence No. 1269 **Map Index:** 52376 **EO Index:** 52376 **Dates Last Seen** _____
Occ Rank: Fair **Element:** 2003-06-30
Origin: Natural/Native occurrence **Site:** 2003-06-30
Presence: Presumed Extant
Trend: Unknown **Record Last Updated:** 2003-09-09

Quad Summary: Logandale (3912242/562B)
County Summary: Colusa

Lat/Long: 39.38368° / -122.19168° **Township:** 18N
UTM: Zone-10 N4359667 E569614 **Range:** 03W
Radius: 80 meters **Mapping Precision:** SPECIFIC **Section:** 27 **Qtr:** NW
Elevation: 92 ft **Symbol Type:** POINT **Meridian:** M

Location: EAST SIDE OF OLD HIGHWAY 99 (FRONTAGE ROAD), ~2 MILES NORTH OF DELEVAN
Location Detail: NEST TREE LOCATED ALONG OLD HIGHWAY 99.
General: PAIR OBSERVED ON 30 JUN 2003, DURING INCUBATION; PRODUCTIVITY UNKNOWN.
Owner/Manager: PVT

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

_____ **Status** _____ **NDDB Element Ranks** _____ **Other Lists** _____
Federal: None **Global:** G5 **CDFG Status:**
State: Threatened **State:** S2

_____ **Habitat Associations** _____

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No.: 1270 **Map Index:** 52377 **EO Index:** 52377 **Dates Last Seen**
Occ Rank: Fair **Element:** 2003-06-30
Origin: Natural/Native occurrence **Site:** 2003-06-30
Presence: Presumed Extant
Trend: Unknown **Record Last Updated:** 2003-09-09

Quad Summary: Logandale (3912242/562B)

County Summary: Colusa

Lat/Long: 39.37691° / -122.19174° **Township:** 18N
UTM: Zone-10 N4358915 E569615 **Range:** 03W
Radius: 80 meters **Mapping Precision:** SPECIFIC **Section:** 34 **Qtr:** NW
Elevation: 92 ft **Symbol Type:** POINT **Meridian:** M

Location: EAST SIDE OF OLD HIGHWAY 99 (FRONTAGE ROAD), ~1.5 MILES NORTH OF DELEVAN

Location Detail: NEST TREE LOCATED ALONG OLD HIGHWAY 99.

General: PAIR OBSERVED ON 30 JUN 2003, DURING INCUBATION; PRODUCTIVITY UNKNOWN.

Owner/Manager: PVT

Castilleja rubicundula ssp. rubicundula

pink creamsacs

Element Code: PDSCR0D482

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G5T2	CNPS List: 1B.2
State: None	State: S2.2	

_____ Habitat Associations _____

General: CHAPARRAL, MEADOWS AND SEEPS, VALLEY AND FOOTHILL GRASSLAND.

Micro: OPENINGS IN CHAPARRAL OR GRASSLANDS. ON SERPENTINE. 20-900M.

Occurrence No. 4	Map Index: 49126	EO Index: 49126	_____ Dates Last Seen _____
Occ Rank: Unknown			Element: 1988-05-25
Origin: Natural/Native occurrence			Site: 1988-05-25
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2002-10-23

Quad Summary: Pennington (3912137/561D)

County Summary: Butte

Lat/Long: 39.31275° / -121.80542°	Township: 17N
UTM: Zone-10 N4352164 E602985	Range: 01E
Area:	Section: 24
Elevation: 70 ft	Meridian: M
	Qtr: NE
	Mapping Precision: NON-SPECIFIC
	Symbol Type: POLYGON

Location: GRAY LODGE WATERFOWL MANAGEMENT AREA. 0.25 MI S OF RUTHERFORD RD. AND 0.5 MI W OF PENNINGTON RD.

Location Detail: SW1/4 OF NE1/4 OF SEC 24.

Ecological: GROWING AMONG GRASSES ON THE BOTTOM OF A DRYING POND.

General: SCATTERED GROUPS OF PLANTS.

Owner/Manager: DFG-GRAY LODGE WA

Centromadia parryi ssp. parryi

pappose tarplant

Element Code: PDAST4R0P2

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G4T2 CNPS List: 1B.2
 State: None State: S2.2

Habitat Associations

General: COASTAL PRAIRIE, MEADOWS AND SEEPS, COASTAL SALT MARSH, VALLEY AND FOOTHILL GRASSLAND.
 Micro: VERNALLY MESIC, OFTEN ALKALINE SITES. 2-420M.

Occurrence No. 18 Map Index: 25629 EO Index: 56506 Dates Last Seen _____
 Occ Rank: Unknown Element: 1998-09-11
 Origin: Natural/Native occurrence Site: 1998-09-11
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2004-08-25

Quad Summary: Pennington (3912137/561D)
 County Summary: Butte

Lat/Long: 39.31727° / -121.80881° Township: 17N
 UTM: Zone-10 N4352661 E602686 Range: 01E
 Radius: 80 meters Mapping Precision: SPECIFIC Section: 24 Qtr: NW
 Elevation: 70 ft Symbol Type: POINT Meridian: M

Location: GRAY LODGE WILDLIFE AREA, 2.0 MILES SE OF HEADQUARTERS.
 Location Detail: ONE POLYGON MAPPED IN THE NE 1/4 OF THE NW 1/4 OF SECTION 24.
 Ecological: OPEN AREAS WITH ANNUAL GRASSLAND, IN ALKALINE SOIL. WITH DISTICHLIS SPICATA, ATRIPLEX CORDULATA, ATRIPLEX MINIScula AND ATRIPLEX SUBTILIIS.
 General: UNKNOWN NUMBER OF PLANTS SEEN IN 1998.
 Owner/Manager: DFG-GRAY LODGE WA

Circus cyaneus

northern harrier

Element Code: ABNKC11010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status: SC
State: None	State: S3	

Habitat Associations

General: COASTAL SALT & FRESH-WATER MARSH. NEST & FORAGE IN GRASSLANDS, FROM SALT GRASS IN DESERT SINK TO MOUNTAIN CIENAGAS.
Micro: NESTS ON GROUND IN SHRUBBY VEGETATION, USUALLY AT MARSH EDGE; NEST BUILT OF A LARGE MOUND OF STICKS IN WET AREAS.

Occurrence No. 47	Map Index: 69237	EO Index: 70016	Dates Last Seen
Occ Rank: Unknown			Element: 1993-XX-XX
Origin: Natural/Native occurrence			Site: 1993-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2007-05-10

Quad Summary: Pennington (3912137/561D), Sanborn Slough (3912138/561C)

County Summary: Butte

Lat/Long: 39.36637 ^o / -121.88240 ^o	Township: 18N
UTM: Zone-10 N4358030 E596274	Range: 01E
Radius: 2/5 mile	Section: 32 Qtr: XX
Elevation: 60 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	
Symbol Type: POINT	

Location: NORTH OF BUTTE SINK, ABOUT 0.8 MILES NE OF CONFLUENCE OF BUTTE CREEK AND SANBORN SLOUGH. UPPER BUTTE BASIN WILDLIFE AREA

General: NEST LOCATED IN FIELD, 2 PAIRS OBSERVED RESIDING IN AREA DURING SPRING/SUMMER MONTHS, 1993.

Owner/Manager: DFG-LITTLE DRY CREEK UNIT

Coastal and Valley Freshwater Marsh

Element Code: CTT52410CA

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G3	
State: None	State: S2.1	
_____ Habitat Associations _____		
General:		
Micro:		

Occurrence No. 36	Map Index: 10427	EO Index: 16060	_____ Dates Last Seen _____
Occ Rank: Unknown			Element: 1986-04-16
Origin: Natural/Native occurrence			Site: 1986-04-16
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1998-07-20

Quad Summary: Meridian (3912128/545B), Sanborn Slough (3912138/561C)
 County Summary: Butte, Colusa, Sutter

Lat/Long: 39.28437° / -121.91074°	Township: 17N
UTM: Zone-10 N4348899 E593943	Range: 01E
Area: 7,324.1 acres	Section: 31
Elevation: 50 ft	Meridian: M
	Qtr: NE

Location: BUTTE SINK NW OF SUTTER BUTTES.
 Location Detail: VERY LARGE (ABOUT 11,000 AC).
 Ecological: TYPHA SPP, SCIRPUS SPP & ELEOCHARIS W/RIPARIAN & OPEN WATER MOSAIC. SEVERAL RARE ANIMAL TAXA KNOWN FROM AREA.
 Threat: DUCK CLUBS IN AREA, SURROUNDING AG LAND, AG CONVERSION THREAT.
 General: THIS WAS OCC #036 OF CTT52410CA.
 Owner/Manager: PVT, UNKNOWN

Coccyzus americanus occidentalis

western yellow-billed cuckoo

Element Code: ABNRB02022

Status	NDDB Element Ranks	Other Lists
Federal: Candidate	Global: G5T3Q	CDFG Status:
State: Endangered	State: S1	

Habitat Associations

General: RIPARIAN FOREST NESTER, ALONG THE BROAD, LOWER FLOOD-BOTTOMS OF LARGER RIVER SYSTEMS.
Micro: NESTS IN RIPARIAN JUNGLES OF WILLOW, OFTEN MIXED WITH COTTONWOODS, W/ LOWER STORY OF BLACKBERRY, NETTLES, OR WILD GRAPE.

Occurrence No. 28	Map Index: 10452	EO Index: 25608	Dates Last Seen
Occ Rank: Unknown			Element: 1977-07-31
Origin: Natural/Native occurrence			Site: 1977-07-31
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-10

Quad Summary: Sanborn Slough (3912138/561C)
County Summary: Colusa, Butte

Lat/Long: 39.33182° / -121.89553°	Township: 17N
UTM: Zone-10 N4354182 E595190	Range: 01E
Radius: 1 mile	Section: 18
Elevation: 55 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: XX
Symbol Type: POINT	

Location: BUTTE SINK, E & W OF BUTTE CREEK.

General: SITE BS1-BS3 (GAINES, 1977). FIVE CUCKOOS OBSERVED AT TWO SITES IN THE SAME AREA, JULY-AUGUST 1973; MANY CUCKOO OBSERVATIONS IN JULY 1977; TOTAL OF 9 CUCKOOS OBSERVED AT TWO SEPARATE BUT CLOSELY SITUATED SITES.

Owner/Manager: PVT, DFG

Occurrence No. 62	Map Index: 10505	EO Index: 25595	Dates Last Seen
Occ Rank: Unknown			Element: 1976-06-27
Origin: Natural/Native occurrence			Site: 1976-06-27
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-10

Quad Summary: Sanborn Slough (3912138/561C)
County Summary: Butte, Sutter

Lat/Long: 39.30655° / -121.88164°	Township: 17N
UTM: Zone-10 N4351391 E596422	Range: 01E
Radius: 1/5 mile	Section: 20
Elevation: 55 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: SW
Symbol Type: POINT	

Location: WILD GOOSE COUNTRY CLUB, BUTTE SINK.

General: ONE CUCKOO OBSERVED, POSSIBLY NESTING (AB 27:915).

Owner/Manager: PVT

Occurrence No. 63	Map Index: 10499	EO Index: 25594	Dates Last Seen
Occ Rank: Unknown			Element: 1974-06-19
Origin: Natural/Native occurrence			Site: 1974-06-19
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-10

Quad Summary: Sanborn Slough (3912138/561C)
County Summary: Sutter

Lat/Long: 39.29988° / -121.88304°	Township: 17N
UTM: Zone-10 N4350650 E596311	Range: 01E
Radius: 1/5 mile	Section: 29
Elevation: 55 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: NW
Symbol Type: POINT	

Location: BERRY PATCH GUN CLUB, BUTTE SINK.

General: TWO CUCKOOS OBSERVED BY B. DEUEL; POSSIBLY NESTING.

Owner/Manager: PVT

Falco columbarius

merlin

Element Code: ABNKD06030

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G5 CDFG Status:
 State: None State: S3

Habitat Associations

General: SEACOAST, TIDAL ESTUARIES, OPEN WOODLANDS, SAVANNAHS, EDGES OF GRASSLANDS & DESERTS, FARMS & RANCHES.
 Micro: CLUMPS OF TREES OR WINDBREAKS ARE REQUIRED FOR ROOSTING IN OPEN COUNTRY.

Occurrence No. 10 Map Index: 69240 EO Index: 70019 Dates Last Seen _____
 Occ Rank: Good Element: 1993-10-14
 Origin: Natural/Native occurrence Site: 1993-10-14
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2007-05-14

Quad Summary: West of Biggs (3912147/561A)
 County Summary: Butte

Lat/Long: 39.38227° / -121.84795° Township: 18N
 UTM: Zone-10 N4359832 E599219 Range: 01E
 Radius: 1/10 mile Mapping Precision: NON-SPECIFIC Section: 27 Qtr: SW
 Elevation: 70 ft Symbol Type: POINT Meridian: M

Location: LITTLE DRY CREEK UNIT, ABOUT 0.7 MILES SW OF SCHOHR RANCH.
 Ecological: MANAGED UPLANDS AND WETLANDS. VETCH IS DOMINANT PLANT.
 General: WINTERING SITE. 1 INDIVIDUAL OBSERVED ON 14 OCT 1993.
 Owner/Manager: DFG-LITTLE DRY CREEK UNIT

Great Valley Valley Oak Riparian Forest

Element Code: CTT61430CA

_____ Status _____	NDDB Element Ranks	_____ Other Lists _____
Federal: None	Global: G1	
State: None	State: S1.1	

_____ Habitat Associations _____

General:

Micro:

Occurrence No. 31	Map Index: 10475	EO Index: 15597	_____ Dates Last Seen _____
Occ Rank: Unknown			Element: 1986-05-01
Origin: Natural/Native occurrence			Site: 1986-05-01
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1998-07-31

Quad Summary: Butte City (3912148/561B)
 County Summary: Butte, Glenn

Lat/Long: 39.41761° / -121.89107°	Township: 18N
UTM: Zone-10 N4363707 E595458	Range: 01E
Area: 321.0 acres	Section: 08
Elevation: 70 ft	Meridian: M
	Qtr: W
Mapping Precision: SPECIFIC	
Symbol Type: POLYGON	

Location: HOODOO ISLAND, BUTTE CREEK, S OF BIGGS-PRINCETON RD.
 Location Detail: BOUNDARY FROM DFG MAP BASED ON INTERP OF 1976 AERIALS.
 Ecological: VALLEY OAK DOMINANT IN RIPARIAN FOREST; INCL BOTH MATURE AND V. OAK RIP VEG CLASSES.
 Threat: USE UNCERTAIN BUT HUNTING CLUB USE EXPECTED PER SNOWDEN. FIRE AND AG CONVERSION THREATS.
 General: SWAINSONS HAWK KNOWN FROM SITE. EXCELLENT CONDITION PER SNOWDEN, 1986. THIS WAS OCC #031 OF CTT61430CA.
 Owner/Manager: PVT

Grus canadensis tabida

greater sandhill crane

Element Code: ABNMK01014

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5T4	CDFG Status:
State: Threatened	State: S2	

Habitat Associations

General: NESTS IN WETLAND HABITATS IN NORTHEASTERN CALIFORNIA; WINTERS IN THE CENTRAL VALLEY.

Micro: PREFERS GRAIN FIELDS WITHIN 4 MI OF A SHALLOW BODY OF WATER USED AS A COMMUNAL ROOST SITE; IRRIGATED PASTURE USED AS LOA

Occurrence No. 529	Map Index: 52265	EO Index: 52265	Dates Last Seen
Occ Rank: Good			Element: 2003-02-13
Origin: Natural/Native occurrence			Site: 2003-02-13
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-08-27

Quad Summary: Pennington (3912137/561D)

County Summary: Butte

Lat/Long: 39.35339° / -121.79239°	Township: 17N
UTM: Zone-10 N4356689 E604047	Range: 02E
Area:	Section: 06 Qtr: SW
Elevation: 82 ft	Meridian: M

Mapping Precision:NON-SPECIFIC
Symbol Type:POLYGON

Location: GRAY LODGE WILDLIFE MANAGEMENT AREA IS JUST TO THE WEST. SITE IS NORTH OF WEST LIBERTY ROAD AND WEST OF FERRIS ROAD.
Location Detail: AREA PLOTTED BY TOWNSHIP, RANGE, 1/4 OF 1/4 SECTION. REPORTED LATITUDE AND LONGITUDE DID NOT PLOT TO SAME AREA; PLOTTED TO NW 1/4 OF SE 1/4 OF SEC 8.

Ecological: SURROUNDING AREA IS RICE FARMING.

General: WINTERING AREA, ABOUT 35 ADULTS OBSERVED

Owner/Manager: PVT

Occurrence No. 530	Map Index: 52266	EO Index: 52266	Dates Last Seen
Occ Rank: Excellent			Element: 2003-02-17
Origin: Natural/Native occurrence			Site: 2003-02-17
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-08-27

Quad Summary: Pennington (3912137/561D)

County Summary: Butte

Lat/Long: 39.33846° / -121.81286°	Township: 17N
UTM: Zone-10 N4355009 E602305	Range: 01E
Radius: 1/5 mile	Section: 12 Qtr: SW
Elevation: 65 ft	Meridian: M

Mapping Precision:NON-SPECIFIC
Symbol Type:POINT

Location: GRAY LODGE WILDLIFE MANAGEMENT AREA, ABOUT 1/2 MILE SOUTH OF WEST LIBERTY ROAD. ABOUT 1.6 MILES NE OF HEADQUARTERS

Ecological: WETLAND AND FLOODED MEADOW AREA, SURROUNDING AREA IS RICE FARMING

General: WINTERING AREA, ABOUT 50 ADULTS OBSERVED IN THE AREA

Owner/Manager: DFG-GRAY LODGE WA

Occurrence No. 627	Map Index: 69241	EO Index: 70020	Dates Last Seen
Occ Rank: Unknown			Element: XXXX-XX-XX
Origin: Natural/Native occurrence			Site: XXXX-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2007-05-14

Quad Summary: Pennington (3912137/561D), West of Biggs (3912147/561A)

County Summary: Butte

Lat/Long: 39.36860° / -121.86380°	Township: 18N
UTM: Zone-10 N4358297 E597873	Range: 01E
Area:	Section: 33 Qtr: XX
Elevation: 70 ft	Meridian: M

Mapping Precision:NON-SPECIFIC
Symbol Type:POLYGON

Location: ADJACENT TO SE BOUNDARY OF UPPER BUTTE SINK MGMT UNIT OF GRAY LODGE WA, JUST N OF CHEROKEE CANAL & COLUSA HWY JUNCTION.

Ecological: LEVELED RICE FARMLAND.

General: IN THE 1989 PROPERTY ACQUISITION PROPOSAL IT STATED THAT THIS PROPERTY IS USED BY OVER HALF OF THE CENTRAL VALLEY WINTERING POPULATION OF THE GREATER SANDHILL CRANE. CRANE USE DOES NOT EXCEED 200 BIRDS AT ANY ONE TIME.

Owner/Manager: PVT

Hibiscus lasiocarpus

woolly rose-mallow

Element Code: PDMAL0HQOQ

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G4 CNPS List: 2.2
 State: None State: S2.2

Habitat Associations

General: MARSHES AND SWAMPS (FRESHWATER).

Micro: MOIST, FRESHWATER-SOAKED RIVER BANKS & LOW PEAT ISLANDS IN SLOUGHS; IN CALIF., KNOWN FROM THE DELTA WATERSHED. 0-150M.

Occurrence No. 8 Map Index: 10500 EO Index: 20784 Dates Last Seen _____
 Occ Rank: Good Element: 1993-06-30
 Origin: Natural/Native occurrence Site: 1993-06-30
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2006-09-12

Quad Summary: West of Biggs (3912147/561A), Butte City (3912148/561B), Sanborn Slough (3912138/561C)

County Summary: Glenn, Colusa, Butte

Lat/Long: 39.38171° / -121.88115° Township: 18N
 UTM: Zone-10 N4359733 E596361 Range: 01E
 Area: 553.0 acres Mapping Precision: SPECIFIC Section: 29 Qtr: XX
 Elevation: 60 ft Symbol Type: POLYGON Meridian: M

Location: BUTTE CREEK AND ASSOCIATED DRAINAGES; EXTENDING FROM 1-4 MILES SOUTH OF BIGGS-PRINCETON ROAD.
 Location Detail: SEVERAL COLONIES MAPPED WITHIN SECTIONS 20, 29, AND 32.
 Ecological: IN FRESHWATER MARSH ON HEAVY CLAY SOIL. ASSOCIATED WITH TULE AND CATTAILS.
 Threat: AGRICULTURE IS A THREAT.
 General: MORE THAN 1,500 STEMS OBSERVED BY SNOWDEN IN 1989; 9,300 REPORTED BY ROCCO IN 1993. SITE QUALITY MOSTLY GOOD DEPENDING ON SITE HISTORY. MUCH OF AREA FORMER RICE FIELDS. INCLUDES FORMER OCCURRENCE #74.
 Owner/Manager: DFG-UPPER BUTTE BASIN WA, PVT

Occurrence No. 41 Map Index: 10532 EO Index: 20786 Dates Last Seen _____
 Occ Rank: Unknown Element: 1983-08-12
 Origin: Natural/Native occurrence Site: 1983-08-12
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1995-10-25

Quad Summary: Pennington (3912137/561D)

County Summary: Butte

Lat/Long: 39.32033° / -121.87226° Township: 17N
 UTM: Zone-10 N4352931 E597212 Range: 01E
 Area: 12.0 acres Mapping Precision: SPECIFIC Section: 16 Qtr: SW
 Elevation: 55 ft Symbol Type: POLYGON Meridian: M

Location: WEST EDGE OF GRAY LODGE WILDLIFE AREA, ABOUT 4.5 MILES WNW OF PENNINGTON.
 Location Detail: MAPPED IN CHANNEL ABOUT 2 MILES WEST OF GRAY LODGE HEADQUARTERS AND 1.2 MILES NORTH OF BUTTE/SUTTER COUNTY LINE.
 Ecological: IN FRESHWATER MARSH ON HEAVY CLAY SOIL.
 Threat: AGRICULTURE IS A THREAT.
 Owner/Manager: DFG-GRAY LODGE WA

Occurrence No. 42 Map Index: 10506 EO Index: 13231 Dates Last Seen _____
 Occ Rank: Unknown Element: 1983-08-12
 Origin: Natural/Native occurrence Site: 1983-08-12
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2006-09-07

Quad Summary: Sanborn Slough (3912138/561C)

County Summary: Butte

Lat/Long: 39.32350° / -121.88195° Township: 17N
 UTM: Zone-10 N4353273 E596372 Range: 01E
 Area: 32.3 acres Mapping Precision: SPECIFIC Section: 17 Qtr: S
 Elevation: 55 ft Symbol Type: POLYGON Meridian: M

Location: 0.2 TO 0.8 MILE SOUTH OF TULE GOOSE GUN CLUB, BUTTE SINK.
 Location Detail: TWO COLONIES.
 Ecological: IN FRESHWATER MARSH ON HEAVY CLAY SOIL.
 Threat: AGRICULTURE IS A THREAT.
 General: INCLUDES FORMER OCCURRENCE #43.
 Owner/Manager: DFG-UPPER BUTTE BASIN WA

Hibiscus lasiocarpus

woolly rose-mallow

Element Code: PDMAL0H0Q0

Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G4 CNPS List: 2.2
 State: None State: S2.2

Habitat Associations

General: MARSHES AND SWAMPS (FRESHWATER).
 Micro: MOIST, FRESHWATER-SOAKED RIVER BANKS & LOW PEAT ISLANDS IN SLOUGHS; IN CALIF., KNOWN FROM THE DELTA WATERSHED. 0-150M.

Occurrence No. 44 Map Index: 10454 EO Index: 19234 Dates Last Seen _____
 Occ Rank: Unknown Element: 1983-08-12
 Origin: Natural/Native occurrence Site: 1983-08-12
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2006-09-07

Quad Summary: Sanborn Slough (3912138/561C)
 County Summary: Colusa, Butte

Lat/Long: 39.32388° / -121.90446° Township: 17N
 UTM: Zone-10 N4353291 E594431 Range: 01E
 Area: 207.2 acres Mapping Precision: SPECIFIC Section: 18 Qtr: SE
 Elevation: 55 ft Symbol Type: POLYGON Meridian: M

Location: ALONG BUTTE CREEK FROM SANBORN SLOUGH SOUTH TO JUST NORTH OF SUTTER COUNTY LINE; BUTTE SINK.

Location Detail: LARGE POPULATION MAPPED ALONG THE WEST SIDE OF THE BUTTE SINK.

Ecological: IN FRESHWATER MARSH ON HEAVY CLAY SOIL.

Threat: AGRICULTURE IS A THREAT.

Owner/Manager: PVT

Occurrence No. 45 Map Index: 10462 EO Index: 19235 Dates Last Seen _____
 Occ Rank: Unknown Element: 1983-08-12
 Origin: Natural/Native occurrence Site: 1983-08-12
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2006-09-07

Quad Summary: Sanborn Slough (3912138/561C)
 County Summary: Butte, Colusa

Lat/Long: 39.35162° / -121.89320° Township: 17N
 UTM: Zone-10 N4356382 E595364 Range: 01E
 Area: 25.5 acres Mapping Precision: SPECIFIC Section: 06 Qtr: SE
 Elevation: 55 ft Symbol Type: POLYGON Meridian: M

Location: ALONG BUTTE CREEK AND SANBORN SLOUGH NEAR THE SANBORN SLOUGH GUN CLUB.

Location Detail: 2 COLONIES. EAST COLONY IS NEAR GUN CLUB BUILDINGS. WEST COLONY IS 0.3 AIR MILE EAST OF BUILDINGS.

Ecological: IN FRESHWATER MARSH ON HEAVY CLAY SOIL.

Threat: AGRICULTURE IS A THREAT.

General: INCLUDES FORMER OCCURRENCE #46.

Owner/Manager: PVT

Occurrence No. 62 Map Index: 10439 EO Index: 19232 Dates Last Seen _____
 Occ Rank: Unknown Element: 1983-08-12
 Origin: Natural/Native occurrence Site: 1983-08-12
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 2006-09-07

Quad Summary: Sanborn Slough (3912138/561C)
 County Summary: Butte

Lat/Long: 39.31763° / -121.89882° Township: 17N
 UTM: Zone-10 N4352604 E594925 Range: 01E
 Area: 13.3 acres Mapping Precision: SPECIFIC Section: 19 Qtr: NE
 Elevation: 55 ft Symbol Type: POLYGON Meridian: M

Location: EAST OF BUTTE CREEK, ABOUT 1.25 AIR MI SW OF TULE GOOSE GUN CLUB, BUTTE SINK.

Ecological: IN FRESHWATER MARSH ON HEAVY CLAY SOIL.

Threat: AGRICULTURE IS A THREAT.

Owner/Manager: PVT

Hibiscus lasiocarpus

woolly rose-mallow

Element Code: PDMAL0H0Q0

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G4 CNPS List: 2.2
 State: None State: S2.2

_____ Habitat Associations _____

General: MARSHES AND SWAMPS (FRESHWATER).
 Micro: MOIST, FRESHWATER-SOAKED RIVER BANKS & LOW PEAT ISLANDS IN SLOUGHS; IN CALIF., KNOWN FROM THE DELTA WATERSHED. 0-150M.

Occurrence No. 71 Map Index: 10707 EO Index: 20797 _____ Dates Last Seen _____
 Occ Rank: Unknown Element: XXXX-XX-XX
 Origin: Natural/Native occurrence Site: XXXX-XX-XX
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1998-05-05

Quad Summary: Pennington (3912137/561D)
 County Summary: Butte

Lat/Long: 39.36233° / -121.79888° Township: 18N
 UTM: Zone-10 N4357674 E603475 Range: 01E
 Radius: 3/5 mile Mapping PrecisionNON-SPECIFIC Section: 36 Qtr: SE
 Elevation: 70 ft Symbol Type:POINT Meridian: M

Location: JUNCTION OF PENNINGTON ROAD AND GRIDLEY ROAD, NORTH OF GREY LODGE WATERFOWL MANAGEMENT AREA.

General: RATHER VAGUE MAP IS ONLY SOURCE OF INFORMATION.

Owner/Manager: UNKNOWN

Occurrence No. 114 Map Index: 24938 EO Index: 19233 _____ Dates Last Seen _____
 Occ Rank: Good Element: 1989-08-08
 Origin: Natural/Native occurrence Site: 1989-08-08
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1994-02-03

Quad Summary: West of Biggs (3912147/561A)
 County Summary: Butte

Lat/Long: 39.39648° / -121.86666° Township: 18N
 UTM: Zone-10 N4361388 E597589 Range: 01E
 Area: Mapping PrecisionNON-SPECIFIC Section: 21 Qtr: XX
 Elevation: 80 ft Symbol Type:POLYGON Meridian: M

Location: LITTLE DRY CREEK, FROM BIGGS-PRINCETON ROAD SOUTH APPROX. 3 MILES; GRAY LODGE WA.

Location Detail: VARIOUS LOCATIONS THROUGHOUT IT'S LENGTH ON THE UPPER BUTTE SINK UNIT OF GRAY LODGE.

Ecological: FOUND ALONG STEEP CREEK BANKS, USUALLY WITHIN 5 FEET OF WATER. ALSO IN LOW LYING RIPARIAN OR MARSH AREAS NEAR THE CREEKS WHICH ARE SUBJECT TO ANNUAL INUNDATION.

Threat: CONVERSION TO WATERFOWL PONDS AND CHANNEL MAINTENANCE ARE THREATS.

General: MORE THAN 1500 STEMS OBSERVED ALONG LITTLE DRY CREEK AND BUTTE CREEK WITHIN THE UNIT IN 1989 BY SNOWDEN. SITE QUALITY VARIES FROM FAIR TO EXCELLENT DEPENDING ON PAST SITE HISTORY.

Owner/Manager: DFG-GRAY LODGE WA

Laterallus jamaicensis coturniculus

California black rail

Element Code: ABNME03041

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G4T1	CDFG Status:
State: Threatened	State: S1	

Habitat Associations

General: INHABITS FRESHWATER MARTSHES, WET MEADOWS & SHALLOW MARGINS OF SALTWATER MARSHES BORDERING LARGER BAYS.
Micro: NEEDS WATER DEPTHS OF ABOUT 1 INCH THAT DOES NOT FLUCTUATE DURING THE YEAR & DENSE VEGETATION FOR NESTING HABITAT.

Occurrence No. 101	Map Index: 34886	EO Index: 5858	Dates Last Seen
Occ Rank: Good			Element: 1993-09-16
Origin: Natural/Native occurrence			Site: 1993-09-16
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2007-05-10

Quad Summary: Sanborn Slough (3912138/561C)

County Summary: Butte

Lat/Long: 39.36568° / -121.88005°	Township: 18N
UTM: Zone-10 N4357956 E596478	Range: 01E
Radius: 80 meters	Section: 32 Qtr: SE
Elevation: 60 ft	Meridian: M

Location: NORTH OF SUTTER BUTTES; APPROXIMATELY 1.4 KM NORTHEAST OF SANBORN SLOUGH X BUTTE CREEK.
Location Detail: ROC93U0005 LOCATION INCLUDED HERE; THE MAP ATTACHED IS VAGUE BUT IS BY THE SAME AUTHOR AND ON THE SAME DATE AS THE FIELD SURVEY FORM.
Ecological: SEMI-PERMANENT WETLANDS; FALLOW RICE FIELDS WITH A DITCHLINE AT BOTTOM OF FIELD; CATTAILS, SMARTWEED PRESENT AND AREA WAS FILLING WITH WATER.
General: 1 RAIL WAS OBSERVED BY C. ROCCO ON 16 SEPTEMBER 1993.
Owner/Manager: DFG-LITTLE DRY CREEK UNIT

Lepidurus packardi

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status _____ **NDDB Element Ranks** _____ **Other Lists** _____
Federal: Endangered **Global:** G3 **CDFG Status:**
State: None **State:** S2S3

Habitat Associations

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.
Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No.: 208 **Map Index:** 59173 **EO Index:** 59209 **Dates Last Seen** _____
Occ Rank: Unknown **Element:** 1994-02-14
Origin: Natural/Native occurrence **Site:** 1994-02-14
Presence: Presumed Extant
Trend: Unknown **Record Last Updated:** 2005-01-07

Quad Summary: Logandale (3912242/562B), Maxwell (3912232/562C)

County Summary: Glenn, Colusa

Lat/Long: 39.41690° / -122.16380° **Township:** 18N
UTM: Zone-10 N4363376 E571981 **Range:** 03W
Area: 10,770.4 acres **Mapping Precision:** SPECIFIC **Section:** 14 **Qtr:** XX
Elevation: 330 ft **Symbol Type:** POLYGON **Meridian:** M

Location: SACRAMENTO WILDLIFE REFUGE, 8 KM SOUTH OF WILLOWS.

Location Detail: NO OTHER LOCATION INFORMATION GIVEN.

General: 10 INDIVIDUALS COLLECTED.

Owner/Manager: USFWS-SACRAMENTO NWR

Northern Hardpan Vernal Pool

Element Code: CTT44110CA

_____ Status _____ NDDB Element Ranks _____ Other Lists _____
 Federal: None Global: G3
 State: None State: S3.1

_____ Habitat Associations _____
 General:
 Micro:

Occurrence No. 61 Map Index: 10688 EO Index: 26924 _____ Dates Last Seen _____
 Occ Rank: Unknown Element: 1980-05-02
 Origin: Natural/Native occurrence Site: 1980-05-02
 Presence: Presumed Extant
 Trend: Unknown Record Last Updated: 1998-07-15

Quad Summary: Pennington (3912137/561D)
 County Summary: Sutter

Lat/Long: 39.29265° / -121.80553° Township: 17N
 UTM: Zone-10 N4349933 E603005 Range: 01E
 Radius: 1/5 mile Mapping Precision: NON-SPECIFIC Section: 25 Qtr: S
 Elevation: 80 ft Symbol Type: POINT Meridian: M

Location: SUTTER BUTTES AREA. 1 MI W OF PENNINGTON ON N BUTTE RD.
 Location Detail: APPROX 40 ACRES, BOUNDED ON E BY RIDGE W/QUERCUS DOUGLASII.
 Ecological: LARGE SHALLOW POOLS, SLOPE=0 UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.
 Threat: PLOWED FIELD ON W, RICE FIELDS NEARBY.
 Owner/Manager: UNKNOWN

Perognathus inornatus inornatus

San Joaquin pocket mouse

Element Code: AMAFD01061

Status	NDDB Element Ranks	Other Lists
Federal: None State: None	Global: G4T2T3 State: S2S3	CDFG Status:

Habitat Associations

General: TYPICALLY FOUND IN GRASSLANDS AND BLUE OAK SAVANNAS.
Micro: NEEDS FRIABLE SOILS.

Occurrence No. 40	Map Index: 09294	EO Index: 23929	Dates Last Seen
Occ Rank: Unknown			Element: 1929-10-06
Origin: Natural/Native occurrence			Site: 1929-10-06
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-10

Quad Summary: Sites (3912233/563D)
County Summary: Colusa

Lat/Long: 39.30932° / -122.30915°	Township: 17N
UTM: Zone-10 N4351330 E559560	Range: 04W
Radius: 1 mile	Section: 21 Qtr: SE
Elevation:	Meridian: M

Mapping Precision:NON-SPECIFIC
Symbol Type:POINT

Location: 1.5 MI E SITES.
General: MVZ #43248; COLLECTED 4 OCTOBER 1929.
Owner/Manager: UNKNOWN

Occurrence No. 41	Map Index: 09238	EO Index: 23924	Dates Last Seen
Occ Rank: Unknown			Element: 1911-04-28
Origin: Natural/Native occurrence			Site: 1911-04-28
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1989-08-10

Quad Summary: Sites (3912233/563D)
County Summary: Colusa

Lat/Long: 39.30932° / -122.33693°	Township: 17N
UTM: Zone-10 N4351312 E557165	Range: 04W
Radius: 1 mile	Section: 20 Qtr: SW
Elevation:	Meridian: M

Mapping Precision:NON-SPECIFIC
Symbol Type:POINT

Location: SITES.
General: MVZ #12969.
Owner/Manager: UNKNOWN

Sagittaria sanfordii

Sanford's arrowhead

Element Code: PMALI040Q0

_____ **Status** _____ **NDDB Element Ranks** _____ **Other Lists** _____
Federal: None **Global:** G3 **CNPS List:** 1B.2
State: None **State:** S3.2

_____ **Habitat Associations** _____

General: MARSHES AND SWAMPS.

Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES. 0-610M.

Occurrence No.: 30 **Map Index:** 24548 **EO Index:** 6856 **Dates Last Seen** _____
Occ Rank: Unknown **Element:** 1946-08-08
Origin: Natural/Native occurrence **Site:** 1980-XX-XX
Presence: Presumed Extant
Trend: Unknown **Record Last Updated:** 1993-10-27

Quad Summary: Gridley (3912136/560C)

County Summary: Butte

Lat/Long: 39.36288° / -121.72561° **Township:** 17N
UTM: Zone-10 N4357821 E609787 **Range:** 02E
Radius: 2/5 mile **Mapping Precision:** NON-SPECIFIC **Section:** 02 **Qtr:** NW
Elevation: 85 ft **Symbol Type:** POINT **Meridian:** M

Location: 1 MILE WEST OF GRIDLEY.

Location Detail: SOURCE DOCUMENT GIVES LOCATION AS W GRIDLEY RD., 1 MI W OF GRIDLEY.

General: AREA BETWEEN GRIDLEY AND PRINCETON SEARCHED BY C.E. TURNER IN 1980 BUT NO PLANTS WERE FOUND. SITE DESCRIBED IN COLLECTION BY H.L. MASON AND V. GRANT IN 1946 (CAS, UC), MASON AND GRANT MADE ANOTHER COLLECTION THE SAME YEAR FUTHER WEST.

Owner/Manager: UNKNOWN

Thamnophis gigas

giant garter snake

Element Code: ARADB36150

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G2G3	CDFG Status:
State: Threatened	State: S2S3	

Habitat Associations

General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.
Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

Occurrence No. 90	Map Index: 21411	EO Index: 27565	Dates Last Seen
Occ Rank: Good			Element: 1993-XX-XX
Origin: Natural/Native occurrence			Site: 1993-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2006-05-16

Quad Summary: Pennington (3912137/561D)
County Summary: Butte

Lat/Long: 39.31085° / -121.77850°	Township: 17N
UTM: Zone-10 N4351984 E605308	Range: 02E
Radius: 1/5 mile	Section: 20
Elevation: 70 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: SW
Symbol Type: POINT	

Location: CANAL #21, NORTH OF FIELD #64, EAST OF PENNINGTON ROAD, GRAY LODGE WILDLIFE AREA.
Ecological: HABITAT CONSISTS OF OPEN FIELDS WITH SEMIPERMANENT AND PERMANENT WATER AREAS AND CANALS. AREA MANAGED FOR WATERFOWL AND UPLAND GAME BIRDS (PHEASANTS).
General: THREE ADULTS OBSERVED DURING 20 MAY 1992. UNKNOWN NUMBER OF SNAKES OBSERVED DURING 1993.
Owner/Manager: DFG-GRAY LODGE WA

Occurrence No. 95	Map Index: 32390	EO Index: 1630	Dates Last Seen
Occ Rank: Good			Element: 1993-10-01
Origin: Natural/Native occurrence			Site: 1993-10-01
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2002-11-20

Quad Summary: Sanborn Slough (3912138/561C), Butte City (3912148/561B)
County Summary: Colusa, Butte

Lat/Long: 39.37600° / -121.88165°	Township: 18N
UTM: Zone-10 N4359099 E596326	Range: 01E
Radius: 1/5 mile	Section: 32
Elevation: 60 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: NW
Symbol Type: POINT	

Location: NORTHERN PORTION OF BUTTE SINK; APPROX. 1.7 KM NORTHEAST OF THE INTERSECTION BETWEEN GRIDLEY ROAD AND BUTTE CREEK.
Ecological: SEMI-PERMANENT WETLANDS WITH CREEK NEAR THE AREA; OLD RICE GROUND.
Threat: FLOODING, EROSION.
General: 1 JUVENILE OBSERVED.
Owner/Manager: DFG-LITTLE DRY CREEK UNIT

Occurrence No. 96	Map Index: 32391	EO Index: 7113	Dates Last Seen
Occ Rank: Good			Element: 1993-07-28
Origin: Natural/Native occurrence			Site: 1993-07-28
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1995-08-10

Quad Summary: Pennington (3912137/561D), West of Biggs (3912147/561A)
County Summary: Butte

Lat/Long: 39.37631° / -121.86929°	Township: 18N
UTM: Zone-10 N4359147 E597390	Range: 01E
Radius: 1/5 mile	Section: 33
Elevation: 65 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: NW
Symbol Type: POINT	

Location: LITTLE DRY CREEK UNIT OF UPPER BUTTE BASIN WILDLIFE AREA; APPROX. 3.0 KM SOUTHWEST OF SCHOHR RANCH.
Threat: FLOODING, FIRE.
General: 1 INDIVIDUAL OBSERVED AT SITE.
Owner/Manager: DFG-UPPER BUTTE BASIN WA

Thamnophis gigas

giant garter snake

Element Code: ARADB36150

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G2G3	CDFG Status:
State: Threatened	State: S2S3	

Habitat Associations

General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.
Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

Occurrence No. 103	Map Index: 32398	EO Index: 1634	Dates Last Seen
Occ Rank: Good			Element: 1993-10-03
Origin: Natural/Native occurrence			Site: 1993-10-03
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 1995-07-25

Quad Summary: West of Biggs (3912147/561A), Butte City (3912148/561B)
County Summary: Butte

Lat/Long: 39.38827° / -121.87683°	Township: 18N
UTM: Zone-10 N4360466 E596724	Range: 01E
Radius: 1/5 mile	Section: 29
Elevation: 65 ft	Qtr: NE
Mapping Precision: NON-SPECIFIC	Meridian: M
Symbol Type: POINT	

Location: EAST OF BUTTE CREEK; APPROX. 3.5 KM SSE OF THE INTERSECTION BETWEEN PRINCETON ROAD AND BUTTE CREEK.
Ecological: SEMI-PERMANENT WETLANDS WITH IRRIGATION CANAL THROUGH THE AREA.
Threat: FLOODING, FIRE.
General: 1 JUNVENILE OBSERVED.
Owner/Manager: DFG-UPPER BUTTE BASIN WA

Occurrence No. 160	Map Index: 46872	EO Index: 46872	Dates Last Seen
Occ Rank: Excellent			Element: 2001-05-22
Origin: Natural/Native occurrence			Site: 2001-05-22
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2001-12-21

Quad Summary: Pennington (3912137/561D)
County Summary: Butte

Lat/Long: 39.36266° / -121.86775°	Township: 18N
UTM: Zone-10 N4357634 E597542	Range: 01E
Radius: 80 meters	Section: 33
Elevation: 65 ft	Qtr: SW
Mapping Precision: SPECIFIC	Meridian: M
Symbol Type: POINT	

Location: CHEROKEE CANAL, 6.3 MILES NW OF PENNINGTON; NEAR INTERSECT OF GRIDLEY ROAD AND CHEROKEE CANAL.
Ecological: HABITAT CONSISTS OF TULE AND CATTAILS GROWING ALONG MARGIN OF CANAL. MATTED AQUATIC VEGETATION PRESENT WITHIN SLOW MOVING WATER. SURROUNDING LAND CONSISTS OF WILDLIFE REFUGE, RICE FIELDS AND MANAGED HUNT CLUBS.
Threat: SITE NEAR A BUSY ROAD.
General: 22 MAY 2001: 1 ADULT OBSERVED.
Owner/Manager: PVT

Occurrence No. 179	Map Index: 52032	EO Index: 52032	Dates Last Seen
Occ Rank: Good			Element: 1997-10-07
Origin: Natural/Native occurrence			Site: 1997-10-07
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-08-06

Quad Summary: Pennington (3912137/561D)
County Summary: Butte

Lat/Long: 39.34689° / -121.79873°	Township: 17N
UTM: Zone-10 N4355960 E603511	Range: 01E
Radius: 80 meters	Section: 12
Elevation: 70 ft	Qtr: NE
Mapping Precision: SPECIFIC	Meridian: M
Symbol Type: POINT	

Location: PENNINGTON ROAD, ABOUT 135 FT SOUTH OF JUNCTION WITH WEST LIBERTY ROAD. GRAY LODGE WATERFOWL MANAGEMENT AREA.
Ecological: AREA TO WEST OF ROAD IS A MANAGED WATERFOWL AREA WITH FRESHWATER MARSH, UPLAND LEVEES, IRRIGATION DITCHES, & SCATTERED EUCALYPTUS, WILLOW, & COTTONWOOD TREES. EAST SIDE OF ROAD IS IRRIGATION DITCH WITH GRAZED PASTURE BEYOND.
Threat: THREATENED BY TRAFFIC ON ROAD
General: 1 ADULT, 28 INCHES LONG, FOUND DEAD ON ROAD 7 OCT 1997.
Owner/Manager: DFG-GRAY LODGE WA, PVT

Thamnophis gigas

giant garter snake

Element Code: ARADB36150

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G2G3	CDFG Status:
State: Threatened	State: S2S3	

Habitat Associations

General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.
Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

Occurrence No. 181	Map Index: 52400	EO Index: 52400	Dates Last Seen
Occ Rank: Excellent			Element: 2003-06-11
Origin: Natural/Native occurrence			Site: 2003-06-11
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-09-09

Quad Summary: Sanborn Slough (3912138/561C)
County Summary: Butte

Lat/Long: 39.31816° / -121.88346°	Township: 17N
UTM: Zone-10 N4352678 E596249	Range: 01E
Radius: 80 meters	Section: 20
Elevation: 55 ft	Qtr: NW
Mapping Precision: SPECIFIC	Meridian: M
Symbol Type: POINT	

Location: BUTTE SINK, 1 MILE NORTH OF THE BUTTE/SUTTER COUNTY LINE
Ecological: HABITAT CONSISTS OF A CANAL WITHIN A MANAGED WETLAND AREA, DOMINATED BY TULE, CATTAILS, WILLOWS, AND SCATTERED OAKS.
General: 1 ADULTS (~44" IN LENGTH) OBSERVED FORAGING ALONG THE SLOUGH EDGE ON 11 JUN 2003.
Owner/Manager: PVT

Occurrence No. 182	Map Index: 52401	EO Index: 52401	Dates Last Seen
Occ Rank: Unknown			Element: 2003-06-13
Origin: Natural/Native occurrence			Site: 2003-06-13
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-09-09

Quad Summary: Maxwell (3912232/562C)
County Summary: Colusa

Lat/Long: 39.35685° / -122.21061°	Township: 17N
UTM: Zone-10 N4356675 E568009	Range: 03W
Radius: 80 meters	Section: 05
Elevation: 92 ft	Qtr: XX
Mapping Precision: SPECIFIC	Meridian: M
Symbol Type: POINT	

Location: 0.5 MILE NORTH OF DELEVAN ROAD, 1 MILE WEST OF DELEVAN
Location Detail: SNAKE FOUND ON A CROP DUSTER AIRSTRIP, ON A BARE PATCH USED FOR ACCESS TO THE PIPELINE RIGHT-OF-WAY.
Ecological: HABITAT CONSISTS OF RICE FIELDS SURROUNDING AN AIRSTRIP.
General: 1 ADULTS (~18" IN LENGTH) WAS OBSERVED ON 13 MAY 2003
Owner/Manager: PVT

Occurrence No. 183	Map Index: 52407	EO Index: 52407	Dates Last Seen
Occ Rank: Fair			Element: 2003-06-11
Origin: Natural/Native occurrence			Site: 2003-06-11
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2003-09-10

Quad Summary: Pennington (3912137/561D)
County Summary: Butte

Lat/Long: 39.34830° / -121.81967°	Township: 17N
UTM: Zone-10 N4356093 E601704	Range: 01E
Radius: 80 meters	Section: 02
Elevation: 68 ft	Qtr: SE
Mapping Precision: SPECIFIC	Meridian: M
Symbol Type: POINT	

Location: JUST NORTH OF WEST LIBERTY ROAD AND 1.1 MILES WEST OF PENNINGTON ROAD, JUST NORTH OF GRAY LODGE WILDLIFE AREA
Ecological: HABITAT CONSISTS OF A ROADSIDE DITCH, DOMINATED BY CATTAILS, THISTLE, REEDS, AND SMALL WILLOWS.
General: 1 JUVENILE SNAKE (~20" IN LENGTH) OBSERVED ON 11 JUN 2003.
Owner/Manager: PVT

Thamnophis gigas

giant garter snake

Element Code: ARADB36150

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G2G3	CDFG Status:
State: Threatened	State: S2S3	

Habitat Associations

General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.
Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

Occurrence No. 213	Map Index: 61910	EO Index: 61946	Dates Last Seen
Occ Rank: Unknown			Element: 1998-06-10
Origin: Natural/Native occurrence			Site: 1998-06-10
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2005-07-08

Quad Summary: Biggs (3912146/560B)
County Summary: Butte

* SENSITIVE *	Lat/Long:	Mapping Precision:	Township:
	UTM:		Range:
	Radius:	Symbol Type:	Section:
	Elevation:		Meridian:
			Qtr:

Location: *SENSITIVE* Location information suppressed.
Location Detail: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information:
 (916) 324-3812.

Owner/Manager:	Occurrence No. 214	Map Index: 61912	EO Index: 61948	Dates Last Seen
* SENSITIVE *	Occ Rank: Unknown			Element: 1998-06-25
	Origin: Natural/Native occurrence			Site: 1998-06-25
	Presence: Presumed Extant			
	Trend: Unknown			Record Last Updated: 2005-07-08

Quad Summary: Logandale (3912242/562B)
County Summary: Glenn

* SENSITIVE *	Lat/Long:	Mapping Precision:	Township:
	UTM:		Range:
	Radius:	Symbol Type:	Section:
	Elevation:		Meridian:
			Qtr:

Location: *SENSITIVE* Location information suppressed.
Location Detail: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information:
 (916) 324-3812.

Owner/Manager:	Occurrence No. 242	Map Index: 64673	EO Index: 64752	Dates Last Seen
	Occ Rank: Unknown			Element: 1988-XX-XX
	Origin: Natural/Native occurrence			Site: 1988-XX-XX
	Presence: Presumed Extant			
	Trend: Unknown			Record Last Updated: 2006-05-11

Quad Summary: Gridley (3912136/560C)
County Summary: Butte

Lat/Long: 39.33362° / -121.73436°	Township: 17N
UTM: Zone-10 N4354564 E609079	Range: 02E
Radius: 1/5 mile	Section: 10
Elevation: 80 ft	Meridian: M
Mapping Precision: NON-SPECIFIC	Qtr: III
Symbol Type: POINT	

Location: DRAIN ON NORTH SIDE OF WEST EVAN REIMER ROAD, 0.5 MILES WEST OF BLOCK ROAD, 2.5 MILES SW OF GRIDLEY.
General: UNKNOWN NUMBER OF SNAKES OBSERVED DURING 1988.
Owner/Manager: UNKNOWN

Thamnophis gigas

giant garter snake

Status	NDDB Element Ranks	Element Code: ARADB36150	Other Lists
Federal: Threatened	Global: G2G3		
State: Threatened	State: S2S3		CDFG Status:

Habitat Associations

General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.

Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

Occurrence No.: 243	Map Index: 64674	EO Index: 64753	Dates Last Seen
Occ Rank: Unknown			Element: 1989-XX-XX
Origin: Natural/Native occurrence			Site: 1989-XX-XX
Presence: Presumed Extant			
Trend: Unknown			Record Last Updated: 2006-05-11

Quad Summary: Pennington (3912137/561D)

County Summary: Butte

Lat/Long: 39.36212° / -121.85015°	Township: 17N	
UTM: Zone-10 N4357594 E599058	Range: 01E	
Radius: 1/5 mile	Section: 03	Qtr: XX
Elevation: 66 ft	Mapping Precision: NON-SPECIFIC	Meridian: M
	Symbol Type: POINT	

Location: CANAL CROSSING GRIDLEY-COLUSA HWY, E OF HATCH ROAD, 7.5 MILES WEST OF GRIDLEY.

Location Detail: LSU SPECIMENS GIVE LOCATION ONLY AS "8 MI W GRIDLEY".

General: MUSEUM SPECIMENS AT LOUISIANA STATE UNIVERSITY MUSEUM OF ZOOLOGY (#20845 & 20943) COLLECTED 23 MAY 1963. UNKNOWN NUMBER OF SNAKES OBSERVED DURING 1989.

Owner/Manager: UNKNOWN

Wolffia brasiliensis

Brazilian watermeal

Element Code: PMLEM03020

_____ **Status** _____ **NDDB Element Ranks** _____ **Other Lists** _____
Federal: None **Global:** G5 **CNPS List:** 2.3
State: None **State:** S1.3

_____ **Habitat Associations** _____
General: SHALLOW FRESHWATER MARSHES.
Micro: 30-100M.

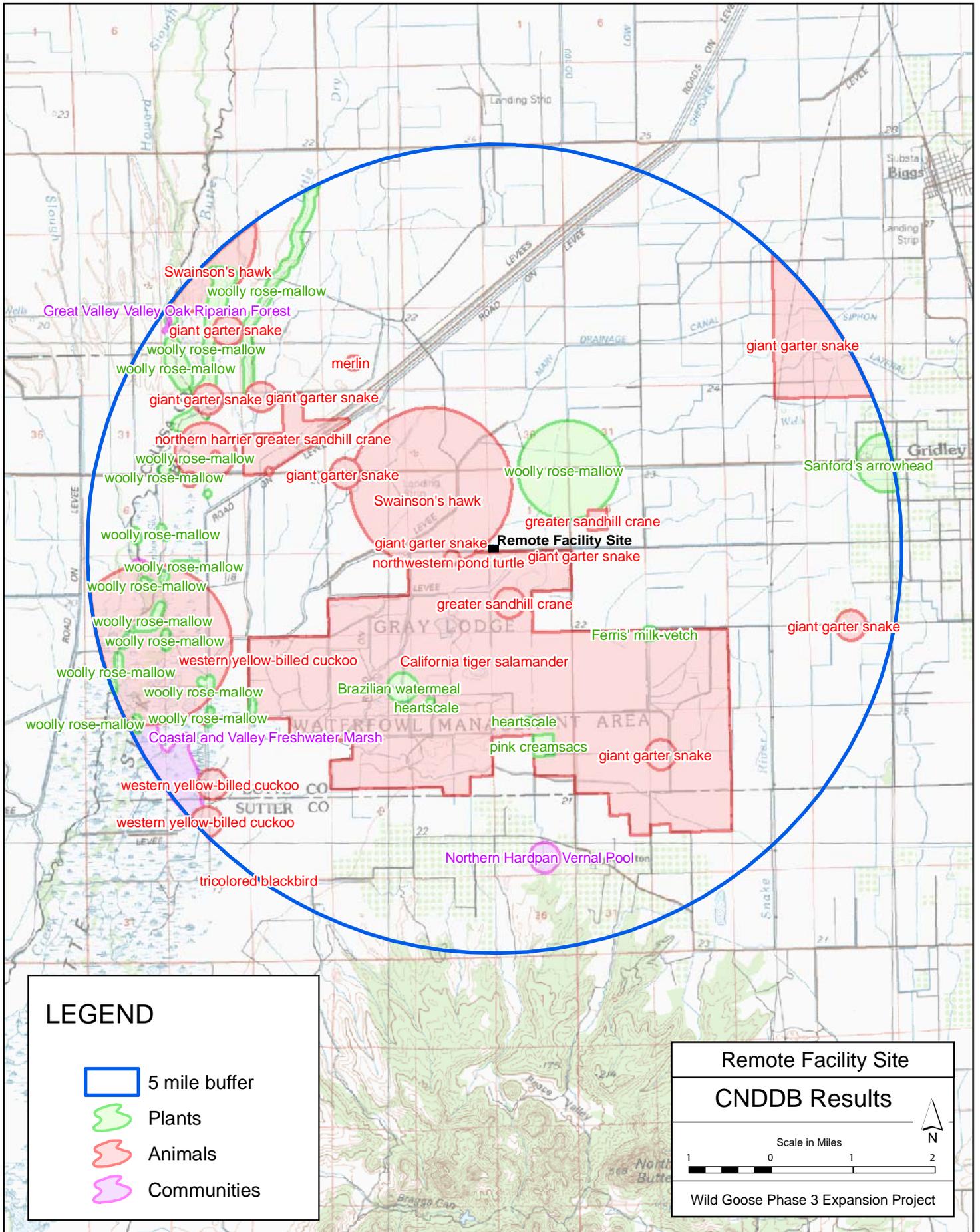
Occurrence No. 1 **Map Index:** 44469 **EO Index:** 44469 **Dates Last Seen** _____
Occ Rank: Unknown **Element:** XXXX-XX-XX
Origin: Natural/Native occurrence **Site:** XXXX-XX-XX
Presence: Presumed Extant
Trend: Unknown **Record Last Updated:** 2000-12-07

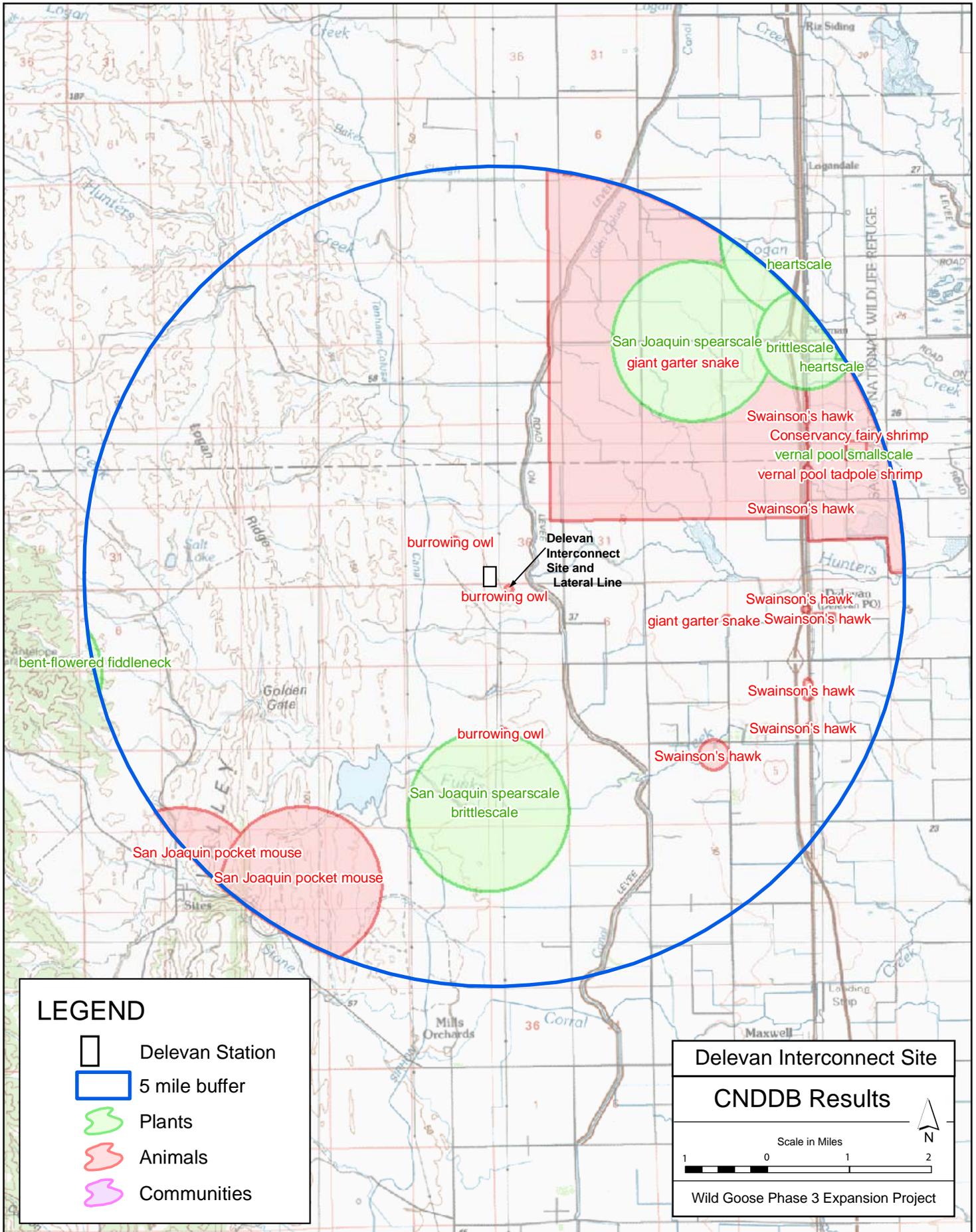
Quad Summary: Pennington (3912137/561D)
County Summary: Butte

Lat/Long: 39.32348° / -121.83774° **Township:** 17N
UTM: Zone-10 N4353318 E600183 **Range:** 01E
Radius: 1/5 mile **Mapping Precision:** NON-SPECIFIC **Section:** 15 **Qtr:** XX
Elevation: 65 ft **Symbol Type:** POINT **Meridian:** M

Location: GRAY LODGE WILDLIFE MANAGEMENT AREA, CANAL NEAR THE VISITOR'S CENTER.
Location Detail: MAPPED AS BEST GUESS USING LAT/LONG GIVEN BY OSWALD.

Owner/manager: DFG-GRAY LODGE WA





Attachment B

Photographs of Communities at Project Sites



Parking lot for the hunters at the Remote Facility Site, December 4, 2008.



Remote Facility Site – Berm and waters to the west of the parking lot, December 4, 2008.



Looking at grasslands from the boundary of the Delevan Interconnect Site, December 4, 2008.



Close-up of the predominant habitat at the Delevan Interconnect Site, December 4, 2008.