BIOLOGICAL RESOURCES ASSESSMENT VARTNAW LANDING 5300 REDWOOD HIGHWAY 149 MCNEAR AVE PETALUMA, SONOMA COUNTY, CALIFORNIA APN 019-300-019



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This assessment is based on information available at the time of the study and on-site conditions that were observed on the date of the site visits referenced in the report. In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of the biologist with experience working with the species and habitats. For some threatened and endangered species, a site survey at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies.

EXECUTIVE SUMMARY

This report presents the results of a biological resources assessment conducted for approximately 4 acres located at 149 McNear Avenue in Petaluma, Sonoma County, California. The project site is south of Petaluma Hill Boulevard South, east of McNear Avenue, and north of Nadine Lane approximately 1 mile southeast of downtown Petaluma. A single-family residence is located at 55 McNear Avenue and a second residence is located just south of 1400 Petaluma Boulevard South. There is also an abandoned farmhouse south of the single-family residence at 55 McNear Ave and a dilapidated barn located in the south-central interior of the property. A dirt road, no longer actively used, provides access to the site from the southwest corner of the property off of McNear Avenue. Surrounding land uses are single-family residences to the north, east and south and the Petaluma Veterans Building to the west.

The purpose of the biological resource assessment is to identify special-status plant and wildlife species and sensitive habitats (including wetlands and creeks) that have the potential to occur on or in the vicinity of the study area and to determine if the proposed vineyard development would affect these resources. Recommendations are provided to minimize or avoid impacts to biological resources.

Based on background data collected and site visits conducted in June 2019 and on February 4, 2021, it was determined that the project site provides potential habitat for nesting birds and special-status bats. No potential wetlands were identified on the site. The site provides marginal habitat for special-status plants associated with disturbed grassland habitats.

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1.0 INTRODUCTION

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Based on background data collected and site visits conducted in June 2019 and on February 4, 2021, it was determined that the project site provides potential habitat for nesting birds and special-status bats. No potential wetlands were identified on the site. The site provides marginal habitat for special-status plants associated with grassland habitats.

Site Description

Habitat on the site consists of developed (the houses and barn), ruderal (disturbed areas associated with the structures), and mostly non-native grassland. There are several mature trees throughout the project site including but not limited to valley oak (Quercus lobata), coast live oak (*Quercus agrifolia*), cottonwood (*Populus* sp.), California bay (*Umbellularia californica*), walnut (*Juglans* sp.), and plum (*Prunus* sp.). There are large patches of non-native blackberry (*Rubus armeniacus*) and native coyote bush (*Baccharis pilularis*) intermixed with ornamentals and a variety of non-native herbs and grasses.

In the interior portions of the property there are several piles of fill that have been overgrown with non-natives and ornamentals.





2246 Camino Ramon San Ramon, CA 94583 Figure 1: Site Map Vartnaw Landing Petaluma, California A summary of the method and results of our wetland and biological resource assessments follows.

2.0 WETLANDS ASSESSMENT

2.1 Corps of Engineers Jurisdictional Criteria Review

Unless exempt from regulation, all proposed discharges of dredged or fill material into waters of the United States require U.S. Army Corps of Engineers (Corps) authorization under Section 404 of the Clean Water Act (33 U.S.C. 1344) and Clean Water Act Section 401 authorization from the Regional Water Quality Control Board (RWQCB). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including ephemeral and intermittent streams), and farmed wetlands.

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The Corps identifies wetlands using a "multi-parameter approach" which requires positive wetland indicators in three distinct environmental categories: hydrology, soils, and vegetation. The *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West*, which was released in early 2007 and revised in 2008 (version 2.0), is utilized when conducting jurisdictional wetland determinations in areas identified within the boundaries of the Arid West (U.S. Army Corps of Engineers, 2008). The project site falls within the Arid West region and so wetlands identified on the site were delineated using that guidance.

On June 22, 2020, the Environmental Protection Agency (EPA) and the Department of the Army's Navigable Waters Protection Rule: Definition of "Waters of the United States" (NWPR) became effective in 49 states and in all US territories. "Waters of the U.S." (WOTUS) are waters such as oceans, rivers, streams, lakes, ponds, and wetlands subject to Corps Regulatory Program jurisdiction under Section 404 of the Clean Water Act (CWA). The San Francisco District will use the NWPR definitions of WOTUS when making permit decisions and providing landowners written determinations of the limits of federal jurisdiction on their property (SPNUSACE, 2020). Under this new rule, jurisdictional features must have a direct surface connection to a navigable water. Certain features previously subject to potential regulation such as farm or roads side ditches, ephemeral streams, and isolated wetlands are excluded under the new rule. It should be noted, the State Water Resources Board in anticipation of this rule has developed its own wetland definition in efforts to maintain jurisdiction over certain wetland features including ephemeral drainages and isolated wetlands.

2.1.1 Potential Wetlands

Section 328.3 of the Federal Code of Regulations defines wetlands as:

"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

EPA, 40 CFR 230.3 and CE, 33 CFR 328.3 (b)

intermittent streams), wetlands (excluding isolated wetlands for the Corps), and farmed wetlands.

The three parameters used to delineate wetlands are the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. According to the Corps Manual, for areas not considered "problem areas" or "atypical situations":

"....[E]vidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland delineation."

Vegetation

Plant species identified are assigned a wetland status according to the U.S. Fish and Wildlife Service list of plant species that occur in wetlands (Reed 1988). This wetland classification system is based on the expected frequency of occurrence in wetlands as follows:

OBL	Always found in wetlands		>99% frequency
FACW	Usually found in wetlands	67-99%	
FAC	Equal in wetland or non-wetla	ands	34-66%
FACU	Usually found in non-wetland	S	1-33%
UPL/NLUpland	<1%		

The Corps Manual and Supplements require that a three-step process be conducted to determine if hydrophytic vegetation is present. The first step is the Dominance Test (Indicator 1); the second is the Prevalence Index (Indicator 2); the third is Morphological Adaptations (Indicator 3). The Dominance Test requires the delineator to apply the "50/20 rule". The dominant species are chosen independently from each stratum of the community. In general, dominant species are determined for each vegetation stratum from a sampling plot of an appropriate size surrounding the sample point. Dominants are defined as the most abundant species that individually or collectively account for more than 50 percent of the total vegetative cover in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total cover. If greater than 50 percent of

the dominant species has an OBL, FACW, or FAC status, the sample point meets the hydrophytic vegetation criterion.

If the sample point fails the 50/20 rule and both hydric soils and wetland hydrology are not present, then the sample point does not meet the hydrophytic vegetation criterion, unless the site is a problematic wetland situation. However, if the sample point fails Indicator 1, but hydric soils and wetland hydrology are both present, the delineator must apply the Indicator 2, Prevalence Index. The Indicator 3, Morphological Adaptations, is rarely used in this region.

<u>Hydrology</u>

The Corps jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period sufficient to create anoxic soil conditions during the growing season (a minimum of 14 consecutive days). Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation or oxidized root channels, or secondary indicators such as the FAC-neutral test or the presence of a shallow aquitard. Only one primary indicator is required to meet the wetland hydrology criterion; however, if secondary indicators are used, at least two secondary indicators must be present to conclude that an area has wetland hydrology.

Soils

The Natural Resource Conservation Service (NRCS) defines a hydric soil as follows:

"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part." Federal Register July 13, 1994, U.S. Department of Agriculture, NRCS

Soils formed over long periods under wetland (anaerobic) conditions often possess characteristics that indicate they meet the definition of hydric soils. The supplement provides a list of the hydric soil indicators that are known to occur in region. Soil samples were collected and described according to the methods provided in the supplements. Soil chroma and values were determined using a Munsell soil color chart (Kollmorgen 1975). If any of the soil samples met one or more of the hydric soil indicators described in the supplement hydric soils were determined to be present.

2.1.2 Waters of the U.S. (Other Waters)

"Other waters" or "Waters of the United States" (WUS) other than wetlands are also potentially subject to Corps jurisdiction. WUS subject to Corps jurisdiction include ponds, lakes, rivers, streams (including ephemeral and intermittent streams), and all areas below the High Tide Line (HTL) subject to tidal influence. Jurisdiction in non-tidal areas extends to the ordinary high-water mark (OHW) defined as: "...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

Federal Register Vol. 51, No. 219, Part 328.3 (e). November 13, 1986

2.2 San Francisco Regional Water Quality Control Board

The Regional Water Quality Control Board regulates waters of the State pursuant to Sections 13260(a)(1) and 13050(e) of the State Water Code, and the Porter Cologne Act. In addition, anyone proposing to conduct a project that requires a federal permit or involves dredge or fill activities that may result in a discharge to U.S. surface waters and/or "Waters of the State" are required to obtain a Clean Water Act (CWA) Section 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) from the Regional Water Quality Control Board, verifying that the project activities will comply with state water quality standards. The most common federal permit for dredge and fill activities is a CWA Section 404 permit issued by the Corps of Engineers (North Coast Regional Water Quality Control Board, 2007). In general, the RWQCB employs similar wetland delineation techniques for identifying wetland areas potentially subject to its regulation.

Section 401 of the CWA grants each state the right to ensure that the State's interests are protected on any federally permitted activity occurring in or adjacent to Waters of the State. In California, the Regional Water Quality Control Boards (Regional Board) are the agency mandated to ensure protection of the State's waters. So if a proposed project requires a U.S. Army Corps of Engineers CWA Section 404 permit, falls under other federal jurisdiction, and has the potential to impact Waters of the State, the Regional Water Quality Control Board will regulate the project and associated activities through a Water Quality Certification determination (Section 401) (North Coast Regional Water Quality Control Board, 2007).

However, if a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a fill discharge to "Waters of the State", the Regional Board has the option to regulate the project under its state authority (Porter-Cologne) in the form of Waste Discharge Requirements or Waiver of Waste Discharge Requirements (North Coast Regional Water Quality Control Board, 2007). Waters of the State include isolated wetlands, which are not regulated by the Corps.

In June 2020, the State of California developed its definition of a wetland to address arid conditions in the west. The definition differs from the federal definition in that a wetland can include only wetlands soil and hydrology and not hydrophytic wetland vegetation.

However, if the area does have vegetation, it must include wetland vegetation in order to be classified a wetland.

2.3 California Department of Fish and Wildlife

Activities that result in the substantial modification of the bed, bank or channel of a stream or lake may require a Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600-1607 of the California Fish and Game Code. On streams, creeks and rivers, the extent of CDFW jurisdiction extends from the top of bank to top of bank or the outer limits of the riparian canopy, whichever is wider.

2.4 Background review

Prior to conducting the on-site wetlands assessment within the study area, various background materials relating to the site were reviewed. These include aerials from Google earth and the Petaluma River U.S.G.S. 7.5-minute quadrangle. No potential wetlands were identified in the background review. In addition, historic aerials of the property were reviewed on historicaerials.com dating back to 1952. Those aerials showed that much of the property was a farm (likely a chicken farm) and no potential wetlands were observed on the historic aerials either

Additionally, the Soil Survey of Sonoma County (web Soil Survey) was reviewed to determine if any of the soils on the project site are mapped as hydric soils. The presence of a hydric soil-mapping unit on a project site suggests the presence of potential wetland habitats and therefore is another tool used in potential wetland identification.

Soil within the Study Area is mapped as Yolo clay loam 0 to 5 percent slopes. This soil is not listed as hydric on the County or National list.

2.5 Wetland Assessment and Results

On February 4, 2021 I conducted a wetland delineation within the Study Area. The entire project site was walked to identify potential wetlands based on visual observation. Several large patches of Himalayan blackberry (*Rubus armeniacus*) were observed. Because Himalayan blackberry is listed as a facultative species (meaning it is found 50 percent of the time in wetlands and 50 percent of the time in uplands), sample points were taken at these locations. A total of 9 soil sample points were dug to a depth of 16 inches. None of the soil pits showed evidence of hydric soils therefore these areas were determined not to be wetlands. Please refer to Appendix B for copies of the data sheets and Plate 1 for a map illustrating the sample point locations. No potential wetlands were identified on the site.



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Vartnaw Landing Petaluma, California



Blackberry patch north of the existing barn



Site looking southeast



Middle of site looking southwest. Note fill piles.

3.0 REGULATORY FRAMEWORK

Special-status plants and animals are legally protected under the State and Federal Endangered Species Acts or other regulations, and species that are considered rare by the scientific community. Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFW special status invertebrates are all considered special status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal.

Sources consulted for up-to-date information on conservation status included the U.S. Fish and Wildlife Service (USFWS) (2021) for federally listed species (including Proposed and Candidate species) and California Department of Fish and Wildlife (CDFW) (2021) for State of California listed species. Special-status species also include species with California Rare Plant Rank (CRPR) 1A (Plants Presumed Extinct in California), CRPR 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere), or CRPR 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere), as indicated by the CNPS *Inventory* (CNPS 2021). Impacts to these species must be reviewed under the provisions of the California Environmental Quality Act (CEQA) Guidelines.

Also considered special-status are those species with CRPR 3 (Plants About Which We Need More Information—A Review List) and CRPR 4 (Plants of Limited Distribution—A Watch List) of the CNPS Inventory. CRPR4 are considered to be of lower sensitivity, and generally do not fall under specific state or federal regulatory authority.

4.0 SPECIAL-STATUS PLANTS

4.1 Background Review for Special-status Plants

Prior to conducting the field reconnaissance, a focused review of literature and data sources was conducted to identify special-status plant species with a potential to occur in the study area. Sources reviewed included California Natural Diversity Database (CNDDB, 2021) occurrence records for the Petaluma USGS 7.5' quadrangle and the quadrangles surrounding it.

Based on information from the above sources, a target list of special-status plants with potential to occur in the vicinity of the study area was developed (Table 1). Special-status plants occurring with a 1- and 5- mile radius of the project site are illustrated on Figure 2.

On February 4, 2021 a reconnaissance level survey of the site was conducted. The site was walked on foot and habitats characterized. The site is primarily dominated by non-native grasses, ornamentals, non-native blackberry, plum and palm trees and oaks.

4.2 Special-status Plants

Species associated with grasslands and disturbed areas have the potential to occur on the project site. Therefore, rare plant surveys are recommended for species with a moderate potential to occur on site the spring prior to ground disturbance.

4.3 Oaks

Several oak trees occur on the site especially along the southern property boundary. These include coast live oak (*Quercus agrifolia*) and valley oak (*Quercus lobata*). Potential impacts to oak trees and associated mitigation will be addressed in a separate report.





2246 Camino Ramon San Ramon, CA 94583 Figure 2: CNDDB Plant Occurrences Within 5-miles of Vartnaw Landing Petaluma, California

5.0 SPECIAL-STATUS ANIMALS

5.1 Background Review and Field Assessment for Special-status Animals

The California Department of Fish and Wildlife's Natural Diversity Database (CNDDB) was reviewed (Petaluma River and surrounding quadrangles) to identify special-status species potentially occurring on or in the vicinity of the project site. Based on information from the above sources, a target list of special-status animals with potential to occur in the vicinity of the study area was developed (Table 1).

5.2 Results

Special-status animal species occurring within a 1- and 5-mile radius of the project site are illustrated on Figure 3.

The trees, shrubs, and grasslands and structures on the project site provide nesting habitat for a variety of birds. The mature trees and structures on the property provide potential habitat for roosting special-status bats as well.

5.2.1 Nesting Birds and Raptors

The trees on the site provide habitat for a variety of nesting birds and raptors. Birds and raptors are protected under the federal Migratory Bird Treaty Act (50 CFR 10.13). Their nest, eggs, and young are also protected under California Fish and Wildlife Code (§3503, §3503.5, and §3800). In addition, raptors such as the white-tailed kite (*Elanus leucurus*) are "fully protected" under Fish and Wildlife Code (§3511). Fully protected raptors cannot be taken or possessed (that is, kept in captivity) at any time.

5.2.2 Special-status Bats

The trees and structures, particularly the old barn, provide potential roosting habitat for various special-status bat species known to occur in the project region including but not limited to pallid bat (*Antrozous pallidus*), Pacific western big- eared bat (*Corynorhinus townsendii townsendii*), and long-eared myotis (*Myotis evotis*). These bat species are California Species of Special Concern and may roost in mature trees, snags, crevices, cavities, and foliage within this habitat. Maternity roosting for bats is April through November.





2246 Camino Ramon San Ramon, CA 94583 Figure 2: CNNDB Wildlife Occurrences Within 5-miles of 14005 Highway 12 Glen Ellen, California

Table 1. Special-status plant species with potential to occur in the vicinity of 149 McNear Ave & Petaluma Blvd. S, Petaluma, Sonoma County

	a 1		Flowering	Potential for Occurrence
Plant Species	Status	Habitat ²	Period	on Project Site
Franciscan onion	CRPR 1B.2	Clay soil, volcanic or serpentine substrate; cismontane woodland, valley and foothill	May-June	Marginal habitat may occur on site.
(Allium peninsulare var. franciscanum)		grassland.		Low Potential
Napa false indigo	CRPR 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, North Coast	April-July	Not observed during February 4, 2021 reconnaissance.
(Amorpha californica var. napensis)		coniferous forest.		No Potential
Bent-flowered fiddleneck	CRPR 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland, openings in	March-June	Marginal habitat may occur on site.
(Amsinckia lunaris)		broadleaved upland forest.		Low Potential
Marin manzanita	CRPR 1B 2	Sandstone or granitic substrate; broadleafed upland forest, closed-cone	December-	No manzanita observed in area proposed for development.
(Arctostaphylos virgata)		coniferous forest, chaparral, North Coast coniferous forest.	March	No Potential
Alkali milk-vetch	CRPR 1B.2	Alkaline, often adobe clay soil; playas, vernal pools, alkali flats within valley and	March-June	Suitable habitat not present.
(Astragalus tener var. tener)		foothill grassland, coastal salt marsh.		No Potential
Big-scale balsamroot		Chaparral, cismontane woodland, valley and		Marginal habitat may occur on site.
	CRPR 1B.2	foothill grassland, sometimes serpentine	March-July	
(Balsamorhiza macrolepis)		substrate.		Low Potential

Plant Species	Status ¹	Habitat ²	Flowering Period	Potential for Occurrence on Project Site
Sonoma sunshine	FE, SE, CRPR 1B.1	Vernally moist to inundated places; vernal pools, valley and foothill grassland.	February-April	No suitable habitat occurs in survey area.
(Blennosperma bakerı)				No Potential
Narrow-anthered brodiaea		Gravelly soil (?), volcanic substrate (?); broadleafed upland forest, chaparral, cismontane woodland, lower montane	May July	Suitable substrate not present.
(Brodiaea leptandra [B. californica var. leptandra])	CRPR ID.2	coniferous forest, valley and foothill grassland.	iviay-july	Low Potential
Seaside bittercress	CRPR 2B.1	Occurs usually in wetlands, occasionally in non-wetlands. Redwood forest and mixed	April-June	Suitable substrate not present.
Tiburop paintbrush	<u> </u>			NO- Polenilai Suitable substrate not present
(Castilleia affinis var. nealecta)	FE, ST, CRPR 1B.2	Rocky soil, serpentine substrate; valley and foothill grassland.	April-June	No Potential
				No ceanothus observed during
Rincon Ridge ceanothus	CRPR 1B.1	CRPR 1B.1 Dry sites, volcanic or serpentine substrate; closed-cone coniferous forest, chaparral, cismontane woodland.	February-June	February 4, 2021 reconnaissance.
(Ceanothus confusus)				No Potential
Nicasio ceanothus	CRPR 1B.2	Serpentinite, rocky, sometimes clay.	March-May	No ceanothus observed during February 4, 2021 reconnaissance.
(Ceanothus decornutus)		Chaparral (maritime)	,	No Potential
Mason's ceanothus	SR, CRPR 1B.2	Rocky places, serpentine substrate;	March-May	No ceanothus observed during February 4, 2021 reconnaissance.
(Ceanothus masonii)		ореннуз пі спаранаі.		No Potential
Pappose tarplant (Centromadia [Hemizonia] parryi ssp. parryi)	CRPR 1B.2	Vernally moist sites, often alkaline soil; chaparral, coastal prairie, meadows, coastal salt marshes, valley and foothill grassland.	May- November	No suitable habitat occurs in survey area.

Plant Species	Status ¹	Habitat ²	Flowering Period	Potential for Occurrence on Project Site
				No Potential
Point Reyes bird's-beak (Chloropyron maritimum ssp. palustre)	CRPR 1B.2	Coastal salt marshes.	May-October	No suitable habitat occurs in survey area.
Soft bird's- beak (Chloropyron molle ssp. molle)	FE, SR, CRPR 1B.2	Coastal salt marshes.	July-November	No suitable habitat occurs in survey area. No Potential
Sonoma spineflower (Chorizanthe valida)	FE, SE, CRPR 1B.1	Sandy soil, coastal prairie.	June-August	Suitable substrate not present. No Potential
Mt. Tamalpais thistle (Cirsium hydrophilum var. vaseyi)	CRPR 1B.2	Serpentinite seeps. Broadleafed upland forest, chaparral and meadows and seeps.	May-August	No suitable habitat occurs in survey area. No Potential
Baker's larkspur (Delphinium bakeri)	FE, SE, CRPR 1B.1	Decomposed shale substrate; broadleafed upland forest, coastal scrub, valley and foothill grassland, possibly sometimes disturbed areas (e.g., fence lines).	March-May	Suitable substrate probably does not occur in survey area.
Golden larkspur (<i>Delphinium luteum</i>)	FE, SR, CRPR 1B.1	± moist places, rocky soil, generally north- facing slopes; chaparral, coastal prairie, coastal scrub.	March-May	No suitable habitat occurs in survey area. No Potential
Western leatherwood (<i>Dirca occidentalis</i>)	CRPR 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, North Coast coniferous forest, and Cismontane woodland.	Jan-Mar (Apr)	No suitable habitat occurs in survey area. No Potential
Dwarf downingia	CRPR 2B.2	Vernal pools, vernally moist places in valley and foothill grassland, sometimes ditches.	March-May	Suitable substrate not present.

Plant Species	Status ¹	Habitat ²	Flowering Period	Potential for Occurrence on Project Site
(Downingia pusilla)				No Potential
Tiburon buckwheat (<i>Eriogonum luteolum</i> var. <i>caninum</i>)	CRPR 1B.2	Sandy or gravelly soil, serpentine substrate; chaparral, coastal prairie, valley and foothill grassland, cismontane woodland.	May- September	Suitable substrate not present. No Potential
Marin checker lily (Fritillaria lanceolata var. tristulis)	CRPR 1B.1	Sometimes rock outcrops, often serpentine substrate; coastal bluff scrub, coastal prairie, coastal scrub, riparian habitats (?).	February- May	Suitable substrate not present in survey area. No Potential
Fragrant fritillary (Fritillaria liliacea)	CRPR 1B.2	Generally heavy clay soil, often serpentine substrate; cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland.	February-April	Suitable substrate not present. No Potential
Woolly-headed gilia (Gilia capitata ssp. tomentosa)	CRPR 1B.1	Rocky places, rock outcrops, serpentine substrate; coastal bluff scrub, valley and foothill grassland.	May-July	Suitable substrate probably does not occur in survey area. Outside known range. Low Potential
Congested-headed hayfield tarplant (Hemizonia congesta ssp. congesta)	CRPR 1B.2	Grassy places, often disturbed areas, fallow fields, other ruderal areas; valley and foothill grassland, coastal scrub.	April- November	Grasslands provide potential habitat. Moderate Potential
Marin western flax (Hesperolinon congestum)	FT, ST, CRPR 1B.1	Sometimes barrens, serpentine substrate; valley and foothill grassland, chaparral.	April-August	Suitable substrate probably does not occur in survey area.
Thin-lobed horkelia (Horkelia tenuiloba)	CRPR 1B.2	Moist places, open areas, sandy soil; broadleafed upland forest, chaparral, coastal scrub, valley and foothill grassland.	May-July (August)	Suitable substrate not present. No Potential
Burke's goldfields (Lasthenia burkei)	FE, SE, CRPR 1B.1	Wet or moist (at least vernally) places; generally vernal pools and swales, sometimes meadows.	April-June	Suitable substrate not present in survey area.

Plant Species	Status ¹	Habitat ²	Flowering Period	Potential for Occurrence on Project Site
				No Potential
Contra Costa goldfields (Lasthenia conjugens)	FE, CRPR 1B.1	Vernally moist, open, low-lying places, sometimes alkaline soil; vernal pools, wet meadows, valley and foothill grassland, cismontane woodland, alkaline playas	March-June	Suitable substrate not present in survey area.
legenere				No suitable babitat on site
	CRPR 1B.1	Vernal pools and swales.	April-June	
(Legenere limosa)				No Potential
Jepson's leptosiphon	CRPR 1B.2	Usually volcanic soil (sometimes periphery of serpentine), chaparral, cismontane	March-May	Suitable habitat not present.
(Leptosiphon [Linanthus] jepsonii)		woodland.		No Potential
Tamalpais lessingia (Lessingia micradenia var. micradenia)	CRPR 1B.2	Usually serpentine substrate, often roadsides, thin gravelly soil (?); chaparral, valley and foothill grassland.	(June) July- October	Suitable habitat not present. No Potential
Pitkin marsh lily (Lilium pardalinum ssp pitkinense)	FE, SE, CRPR 1B.1	Saturated places, sandy soil; cismontane woodland, meadows and seeps, freshwater marshes.	June-July	Suitable habitat not present.
Sebastopol meadowfoam (Limnanthes vinculans)	FE, SE, CRPR 1B.1	Seasonally wet places, poorly drained, clay or sandy soil; meadows, valley and foothill grassland, vernal pools.	April-May	Suitable su bstrate not present. No Potential
Cobb Mountain lupine	CRPR 1B.2	Open wooded areas, gravelly soil; broadleafed upland forest, chaparral, cismontane woodland, lower montane	March-June	Suitable substrate not present.
		coniferous forest.		
Marsh microseris (<i>Microseris paludosa</i>)	CRPR 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland.	April-June (July)	Suitable habitat not present on project site. No Potential
Baker's navarretia	CRPR 1B.1	Seasonally moist places, cismontane woodland, meadows and seeps, vernal	April-July	Suitable habitat not present.

Plant Species	Status ¹	Habitat ²	Flowering Period	Potential for Occurrence on Project Site
(Navarretia leucocephala ssp. bakeri)		pools, valley and foothill grassland, lower montane coniferous forest.		No Potential
Marin County navarretia	CRPR 1B.2	Chaparral, closed-cone Pine forest.	May-July	Suitable habitat.b not present.
Petaluma popcorn-flower	CRPR 1A	Wet places; valley and foothill grassland,	May-July	Suitable habitat not present on project site.
(Plagiobothrys mollis var. vestitus)				Low Potential
North Coast semaphore grass	ST, CRPR 1B.1	Moist to wet, open or partly shaded places; broadleafed upland forest, meadows and	March-June	Suitable habitat not present on project site.
(Pleuropogon hooverianus)		freshwater marsh.		No Potential
Marin knotweed	CRPR 3.1	Coastal salt or brackish marshes.	(April) May- August	Suitable habitat not present on project site.
(Polygonum marinense)			(October)	Low Potential
Tamalpais oak (Quercus parvula var. tamalpaisensis)	CRPR 1B.3	Near watersheds.	March-April	Not present on site. No Potential
Point Reyes checkerbloom	CRPR 1B.2	Freshwater marsh.	April- September	Suitable habitat not present on project site.
(Sidalcea calycosa ssp. rhizomata)			coptenie	No Potential
Marin checkerbloom	CRPR 1B.1	Chaparral.	May-June	Suitable habitat not present.
(Sidalcea hickmanii ssp. viridis)				No Potential
Two-tork clover (Trifolium amoenum)	FE, CRPR 1B.1	Moist open sites, heavy soil, sometimes serpentine substrate, sometimes roadsides	April-June	Suitable substrate not present on project site.

Plant Species	Status ¹	Habitat ²	Flowering Period	Potential for Occurrence
		or eroded areas; coastal bluff scrub, valley and foothill grassland.		No Potential
Saline clover		Moist or seasonally moist sites, alkaline or saline soil; marshes and swamps (including		Suitable substrate not present on project site.
(Trifolium hydrophilum)	CRPR 1B.2	coastal salt marshes?), valley and foothill grassland, vernal pools.	Aprıl-June	No Potential
Pacific Grove clover		Occurs usually in wetlands, occasionally in		Suitable habitat does not occur in survey area.
(Trifolium polyodont)	CRPR 1B.1	non-wetlands. Found in meadows.	April-June	No Potential No Potential
Oval-leaved viburnum		Often north-facing slopes; chaparral,	Mayalune	Suitable habitat does not occur in
(Viburnum ellipticum)	CRPR 2B.3	cismontane woodland, lower montane coniferous forest.	(August)	No Potential

¹Plant listing status:

Federal (USFWS 2017a): FE – endangered; FT – threatened

State of California (CDFW 2017): SE- endangered; ST - threatened; SR - rare

California Rare Plant Rank (CRPR) (CNPS 2016): CRPR 1A: Presumed extinct in California. CRPR 1B: Rare, Threatened, or Endangered in California and elsewhere. CRPR 2B: Rare, Threatened, or Endangered in California, more common elsewhere. CRPR 3: Plants about which more information is needed.

CRPR Threat Code extensions: .1: Seriously endangered in California. .2: Fairly endangered in California. .3 Not very endangered in California.

Table 2 - Special-status animal species with potential to occur in the vicinity of 149 McNear Ave & Petaluma Blvd. S Petaluma, Sonoma County, California

Animal*	Status	Habitat	Potential for Occurrence on of In Vicinity of Site
Amphibians and Reptiles			
California tiger salamander	FE ¹ , FT	Needs underground refuges especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	No potential. No suitable habitat on site. Not within
(Ambystoma californiense)			critical habitat.
Western pond turtle	FSC, CSC	Associated with permanent or nearly permanent water in a wide variety of habitats. Requires basking sites, nest sites may be found up to 0.5 km from	No potential. No suitable habitat on site.
(Emmys marmorata)		water.	
California red-legged frog	FT, CSC	Lowlands and foothills in or near permanent sources of deepwater with dense, shrubby or emergent riparian vegetation.	No potential. No suitable habitat on site.
(Rana aurora draytonii)			
Foothill yellow-legged frog	CSC in Sonoma	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	No potential. No suitable habitat on site.
(Rana boylii)	Couny		
Red-bellied newt	CSC	Coastal drainages from Humboldt County to Sonoma County and inland to Lake County. Lives in terrestrial habitats and typically breeds in streams	No potential. No suitable habitat on site.
(Taricha rivularis)		with moderate flow and clean, rocky substrate.	

¹ Listed as federally endangered in Sonoma County (Santa Rosa Plain) and Santa Barbara counties.

Animal*	Status	Habitat	Potential for Occurrence on of In Vicinity of Site
California giant salamander (Dicamptodon ensatus)	CSC	Known from coastal forests near streams and seeps from Mendocino County south to Monterey County and east to Napa County. Adults may be found under rocks, logs and other debris adjacent to water sources. Aquatic larvae are found in cold, clear streams, sometimes in lakes or ponds	No Potential. No suitable habitat on site.
Fish			
Steelhead-Central California Coast DPS	FT, NMFS	Anadromous. Adults and fry recorded in upstream portions of creeks north of San Pablo Bay. Juveniles may rear in lower reaches of larger river systems and Bay before moving out to sea.	No Potential. No suitable habitat on site.
(Oncorhynchus mykiss)			
Coho salmon - central CA coast ESU (<i>Oncorhynchus kisutch</i>)	FE, SE, NMFS	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Occurs inland and in coastal marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	No Potential. No suitable habitat on site.

Animal*	Status	Habitat	Potential for Occurrence on of In Vicinity of Site
Sacramento Splittail (Pogonichthys macrolepidotus)	CSC	Prefers shallow water habitat in slow-moving sections of rivers and sloughs. Found primarily in Delta, Suisun Bay, Suisun Marsh, Napa River, occasionally Petaluma River. Primarily a freshwater fish but tolerant of moderate salinity. Spawns on submerged vegetation in temporarily flooded upland and riparian habitat.	No potential. No suitable habitat on site.
Birds**			
Tricolored blackbird (Agelaius tricolor)	CSC	Colonial nester. Most numerous in the Central Valley & Vicinity. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	No Potential. No suitable habitat on site.
Grasshopper sparrow (Ammodramus savvanrum)	CSC	Dense grasslands in rolling hills, lowland plains, in valleys and on hillsides on lower desert mountain slopes. Favors native grasses when nesting.	No Potential. No suitable habitat on site.
Burrowing owl (Athene cunicularia)	CSC	Open, dry annual or perennial grasslands; deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent on burrowing animals, most notably the California ground squirrel.	No Potential. No ground burrows observed during February 2021 assessment. Site is surrounded by development.

Animal*	Status	Habitat	Potential for Occurrence on of In Vicinity of Site
Golden eagle (Aquila chrysaetos)	FP,	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most part of its range although large tree in open areas, may be used.	No potential. No suitable habitat on site.
Swainson's hawk (Buteo swainsoni)	ST	Breeds in stands with few trees in juniper-sage flats, riparian areas and in oak savannah. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain field supporting rodent populations.	No potential. No suitable habitat on site.
Western snowy plover	FT, CSC	Sandy beaches, salt ponds levees and shores of alkali flats.	No potential. No suitable habitat
(Charadrius alexandrinus nivosus)			
Western yellow billed cuckoo (<i>Coccyzus americanus</i> <i>occidentalis</i>)	FC, SE	(Nesting) Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with low story of blackberry, nettles or wild grape.	No potential. No suitable habitat on site.
Black swift (Cypseloides niger)	CSC	(Nesting) coastal belt of Santa Cruz & Monterey County; central and southern Sierra Nevada; San Bernadino and San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf.	No potential. No suitable habitat on site.
White-tailed kite	FP	(Nesting) rolling foothills/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	Low potential. Site is small and surrounded by development.
(Elanus leucurus)			

Animal*	Status	Habitat	Potential for Occurrence on of In Vicinity of Site
Saltmarsh common yellowthroat (Geothlypis trichas sinuosa)	FSC, CSC	Mostly breeds and winters in wet meadows, fresh emergent wetland, and saline emergent wetland habitats in the San Francisco Bay region. Microhabitat includes thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	No potential. No suitable habitat on site.
Bald eagle (Haliaeetus leucocephalus)	SE	Ocean shore, lake margins, and rivers both for nesting and wintering within one mile of water. Nests in large, old growth or dominant live tree with open branches, especially Ponderosa pine.	No potential. No suitable habitat on site.
Yellow rail	BCC, CSC	Summer resident in eastern Sierra Nevada in Mono County, breeding in shallow freshwater marshes and wet meadows with dense vegetation.	No potential. No suitable habitat on site.
California black rail (Laterallus jamaicensis coturniculus)	FSC, ST	Mainly inhabits salt marshes bordering larger bays. Microhabitat includes tidal salt marsh, freshwater and brackish marshes, all at low elevations.	No potential. No suitable habitat on site.
San Pablo song sparrow (Melospiza melodia samuelis)	CSC	Residents of salt marshes along the north side of San Francisco and San Pablo Bays.	No potential. No suitable habitat on site.
California Ridgway's rail (<i>Rallus obsoletus</i>)	FE, SE	Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Microhabitats associated with abundant growths of pickleweed but feeds away from cover on invertebrates from mud- bottomed sloughs.	No potential. No suitable habitat on site.
Bank swallow (Riparia riparia)	ST	(Nesting) Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks or cliffs with fine- textured/sandy soils near streams, river, lakes, and ocean to dig nest hole.	No potential. No suitable habitat on site.

Animal* Status Habitat		Habitat	Potential for Occurrence on of In Vicinity of Site	
Mammals				
Pallid bat	CSC, WGWB High Priority	Deserts, grasslands, woodlands and forests. Most common in open dry habitats with rocky areas for roosting. Very	Potential for occurrence.	
(Antrozous pallidus)	-	sensitive to disturbance of roosting sites.		
Townsend's big-eared bat	CSC	Throughout California in a variety of habitats. Roosts in the open, hanging from walls and ceilings. Roosting sites	Moderate Potential. Potential for occurrence due to existing structures on site.	
(Corynorhinus townsendii)		limiting. Extremely sensitive to numan disturbance.		
Hoary bat	WBWG Medium	Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges	Low to Moderate Potential. Potential for roosts in larger oak trees on site.	
(Lasiurus cinereus)	Priority	for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.		
Fringed myotis	WGWB High Priority	Associated with a wide variety of habitats including dry woodlands, desert scrub, mesic coniferous forest,	Moderate Potential. Potential for roosts in larger oak trees on site and buildings.	
(Myotis thysanodes)		grassland, and sage-grass steppes. Buildings, mines and large trees and snags are important day and night roosts.		
Long-legged myotis	WBWG High Priority	Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Large hollow	Moderate Potential. Potential for roosts in larger oak trees on site and buildings.	
(Myotis Volans)		roosts. Other roosts include caves, mines and buildings.		
Point Reyes mountain beaver	CSC	Occurs only in western Marin County, almost entirely within Point Reves National Sea shore - Found on moist	No suitable habitat on site.	
(Aplodontia rufa phaea)		north-facing slopes within areas of coastal scrub. Lives in burrow systems and forages on a variety of herbaceous plants.	No potential.	

Animal*	Status	Habitat	Potential for Occurrence on of In Vicinity of Site
Salt-marsh harvest mouse	FE, SE	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat.	No suitable habitat on site.
(Reithrodontomys raviventris)			No potential.
American badger	CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Low Potential. No badger burrows observed during February 2021 reconnaissance. Site is surrounded
(Taxidea taxus)			by development.
Suisun shrew	CSC	Tidal marshes of the northern shores of San Pablo and Suisun bays. Require dense low-lying cover and driftwood	No suitable habitat on site.
(Sorex ornatus sinuosus)		and other litter above the mean high tide line for nesting and foraging.	No potential.
Invertebrates			
Tomales roach	CSC	Habitat generalists. Tolerant of relatively high temperatures and low oxygen levels, however unable to	No suitable habitat on site.
(Lavinia symmetricus)		tolerate very saline water. Tributaries to Tomales Bay.	No potential.
California freshwater shrimp	FE, SE	Endemic to Marin, Napa, and Sonoma counties. Found in low gradient streams where riparian cover is moderate to	No suitable habitat on site.
(Syncaris pacifica)		heavy	No potential.

*Note: FSC = U.S. Fish and Wildlife Service Species of Concern; FE = federally listed as endangered; FT = federally listed as threatened; SE = state listed as endangered; ST = state listed as threatened; SFP = State fully protected (may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW). CSC = California species of special concern; CDFS = considered sensitive by the California Department of Forestry. WBWG (Western Bat Working Group) high priority = represents those species considered the highest priority for funding, planning, and conservation actions. These species are imperiled or are at high risk of imperilment.

**All migratory birds are protected by the Migratory Bird Treaty Act (50 CFR 10), which makes it unlawful to take, possess, buy, sell, purchase or barter any migratory bird, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 CFR 21). In addition, Section 2080 of

the California Fish and Game Code prohibits the killing of a listed species, and Sections 3503, 3503.5, and 3800 of the Fish and Game Code prohibit the take, possession, or destruction of birds, their nests, or eggs.

Table compiled based on review of California Department of Fish and Wildlife Natural Diversity Database for the Petaluma River and surrounding USGS quadrangles. February 2021.

6.0 RECOMMENDATIONS AND MITIGATION MEASURES

The following mitigation measures are recommended for avoiding potential impacts to special-status species potentially occurring on or in the vicinity of the project site.

6.1 Special-status Plants

Special status plants associated with grassland habitats listed in Table 1 as having a moderate potential to occur on the site should be surveyed for the spring prior to ground disturbance associated with project construction.

6.2 Nesting Birds

- If initial ground disturbance or vegetation removal occurs during the breeding season (February 1 through August 31), a qualified biologist will conduct a breeding bird survey no more than 7 days prior to ground disturbance to determine if any birds are nesting in trees adjacent to the study area.
- If active nests are found close enough to the study to affect breeding success, the biologist will establish an appropriate exclusion zone around the nest. This exclusion zone may be modified depending upon the species, nest location, and existing visual buffers. Once all young have become independent of the nest, vegetation removal and grading may take place in the former exclusion zone.
- If initial ground disturbance is delayed or there is a break in project activities of greater than 7 days within the bird-nesting season, then a follow-up nesting bird survey should be performed to ensure no nests have been established in the interim.

6.3 Maternity Roosting Bats

- If initial ground disturbance occurs during the bat maternity roosting season (May 1 through August 31), a qualified biologist will conduct a bat roost assessment of trees within 100 feet of the Study area.
- If the biologist determines there is potential for maternity roosting bats to be present within 100 feet of the Study area, nighttime emergence surveys should be performed to determine if maternity roosting bats are present.
- If bat maternity roosts are present, the biologist will establish an appropriate exclusion zone around the maternity roost.

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Appendix A - Plant Species Observed on Site February 4, 2021

Scientific name
Quercus agrifolia
Quercus lobata
Umbellularia californica
Sequoia sempervirens
Prunus spp.
Phoenix carieensis
Olea europea
Baccharis pilularis
Toxicodendron diversilobum
Foeniculum vulgare
Cyperus eragrostis
Avena sp.
Centaurea solstitialis
Rumex acetosella
Carduus pycnocephalus

Appendix B – Wetland Data Sheets

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Vartnaw Landing	City/Cause Della
Applicant/Owner: GEOFF McComit	City/County: restationa CA Sampling Date: 242
Investigator(s): Locer Macmillan	State: Sampling Point:
Landform (hillslope, terrace, etc.):	Least stills (
Subregion (LRR):	Local relier (concave, convex, none): Slope (%): 1-2.9/0
Soil Map Unit Name: Yolo Class Login	Long: Datum:
Are climatic / hydrologic conditions on the site typical for this time of up	NWI classification:
Are Vegetation, Soil, or Hydrology significantly	disturbed 0. 1 k
Are Vegetation, Soil, or Hydrology naturally are	blamatica No No No No
	biematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc

Hydrophytic Hydric Soil Wetland Hy	Vegetation Present? Present? drology Present?	Yes Yes Yes	No No No	ls the S within a	ampled Area Wetland?	Yes	No	05, 610.
Remarks:	Rainfail	nowever	has	bern	less	30 far		

VEGETATION

Absolute % Cover	Dominan Species?	t Indicator Status	Dominance Test worksheet:
			That Are OBL, FACW, or FAC:(A)
	-		Total Number of Dominant
1.000			Species Across All Strata: (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
			Prevalence Index worksheet: Total % Cover of: Multiply by:
			OBL species x1 =
			FACW species x 2 =
			FAC species x 3 =
164		14	UPL species x 5 =
100	1	Mi	Column Totals: (A) (B)
			Provolence la dura Dia
			Hydrophytic Vegetation Indianterry
			Dominance Test is >50%
			Prevalence Index is ≤3.0 ¹
			Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation ¹ (Explain)
			¹ Indicators of hydric soil and wetland hydrology must be present
			Hydrophytic
f Biotic Crus	st		Vegetation Present? Veg
	Absolute <u>% Cover</u>	Absolute Dominan <u>% Cover</u> Species?	Absolute Dominant Indicator <u>% Cover Species? Status</u>

US Army Corps of Engineers

SOIL

Matrix		Red	Redox Features			in the absence of indicators.)
10 YR3 3	<u>}0</u>	Color (moist)			_Loc ²	Texture Remarks Silfy clay loan Briasle
entration, D=Deplet cators: (Applicab) don (A2) (A3) Jlfide (A4) yers (A5) (LRR C) A9) (LRR D) low Dark Surface (A Surface (A12) y Mineral (S1) d Matrix (S4) r (if present):	ion, RM=Ri le to all LR	educed Matrix. Rs, unless other Sandy Redo Stripped Ma Loamy Mucl Loamy Gley Depleted Ma Redox Dark Depleted Da Redox Depre Vernal Pools	² Location wise note ox (S5) trix (S6) trix (S6) datrix (F3) Surface (F rk Surface essions (F s (F9)	(F1) (F2) (F2) (F7) 8)	Lining, R	C=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
	Color (moist) 10 1 2 3 3 In 12	Color (moist) % 10 1 2 3 3 10 0 10 1 2 3 3 10 0 Color (moist) % 10 1 2 3 3 10 0 Color (A2) Cators: (Applicable to all LR) don (A2) (A3) Ulfide (A4) vers (A5) (LRR C) A9) (LRR D) low Dark Surface (A11) vurface (A12) v Mineral (S1) d Matrix (S4) r (if present):	Color (moist) % Color (moist) 10 10 10 00 In 10 10 100 100 In 10 100 100 100 <tr< td=""><td>Color (moist) % Color (moist) % 10 10 100 % % % 10 100 % % % 10 100 % % % 10 100 % % % 11 100 100 % % 11 100 100 % % 11 100 100 % % % 12 100 100 % % % % 12 100 100 100 %</td><td>Color (moist) % Color (moist) % Type1 10 10 % Type1 % Type1 10 10 % Type1 % Type1 10 10 % Type1 % Type1 10 10.0 % Type1 % Type1 11 10.0 10.0 % Type1 % Type1 11</td><td>Color (moist) % Color (moist) % Type1 Loc2 10 NR33 100 </td></tr<>	Color (moist) % Color (moist) % 10 10 100 % % % 10 100 % % % 10 100 % % % 10 100 % % % 11 100 100 % % 11 100 100 % % 11 100 100 % % % 12 100 100 % % % % 12 100 100 100 %	Color (moist) % Color (moist) % Type1 10 10 % Type1 % Type1 10 10 % Type1 % Type1 10 10 % Type1 % Type1 10 10.0 % Type1 % Type1 11 10.0 10.0 % Type1 % Type1 11	Color (moist) % Color (moist) % Type1 Loc2 10 NR33 100

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (any one indicator is suf	ficient)	Secondary Indicators (2 or more required)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Water-Stained Leaves (B9) 	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe Other (Explain in Remarks) 	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Variation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes	No Depth (inchos):	
Water Table Present? Yes	No Depth (inches):	-
Saturation Present? Yes (includes capillary fringe)	No Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos, previous inspe	ections), if available:
Remarks:		

1

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Vartnaw Landing	City/County Patriceson CA Samelias Data 2/11/2/
Applicant/Owner: GEOFF McComic	State: OA Campling Date: 27121
Investigator(s): Locer Macmillan	Section, Township, Range:
Landform (hillslope, terrace, etc.):	Local relief (concave, convey, none):
Subregion (LRR):Lat:	
Soil Map Unit Name: Yolo Clay Joan	0-5% STOPE NWI classification
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes / No (If no explain in Remarke)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? No Are "Normal Circumstances" present? Voc
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Hydric Soil I Wetland Hy	Vegetation Present? Present? drology Present?	Yes Yes Yes		Is the Sampled Area within a Wetland?	Yes	No
Remarks:	Ramfail	nowever	has	been less	20 far	

VEGETATION

Г

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:
3				Total Number of Dominant
4				(B)
Sapling/Shrub Stratum Total Cover	:			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
2				Prevalence Index worksheet: Total % Cover of: Multiply by:
3	-			OBL species x1 =
4				FACW species x 2 =
5				FAC species 60 x 3 = 180
Herb Stratum Total Cover	:			FACU species x 4 =
1 Lilly Culture	20	N	UPL	UPL species
2. Vince major	10	N	UPL	Column Totals: (A) (B)
3				Prevalence Index = B/A = 3. C
4				Hydrophytic Vegetation Indicators:
5			-	Dominance Test is >50%
6				Prevalence Index is ≤3.0 ¹
8				Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum	40		1	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Rubus armeniarus	60	N	FAC	¹ Indicators of hydric soil and wetland hydrology must
2		-	1	be present.
Total Cover:	60			Hydrophytic
% Bare Ground in Herb Stratum % Cover	of Biotic Cru	ust 💋	-	Vegetation Present? Yes No
Remarks:		1		

SOIL

Profile Des									U ai		
	cription: (Describe to	the depth	needed to docu	ment the inc	dicator	or confirm	the abs	ence of i	ndicator	:)	
Depth	Matrix		Red	ox Features					aloator	.,	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textu	e		Remarks	
0-16	10 YR3/2	100					5	thy	clay	(oar	1
Type: C=C	oncentration, D=Deple	tion, RM=R	educed Matrix.	² Location:	PL=Pore	Lining, R	C=Root C	hannel, I	л=Matrix.		
History	(A1)	Die to all LF	cites, unless othe	erwise noted	l.)		Indica	tors for	Problema	atic Hydrid	c Soils ³ :
Histosof Histic Ep Black Hi Hydroge	oppedon (A2) istic (A3) en Sulfide (A4)		Sandy Rec Stripped M Loamy Mu Loamy Gle	lox (S5) atrix (S6) cky Mineral (I yed Matrix (F	F1) F2)		1 2 Re Re	cm Muck cm Muck educed V ed Parent	(A9) (LR (A10) (Ll ertic (F18 Material	R C) RR B)) (TF2)	
1 cm Mu Depleted Thick Da Sandy M	a Layers (A5) (LRR C) Jick (A9) (LRR D) d Below Dark Surface (A12) Aucky Mineral (S1)	(A11)	Depleted M Redox Dar Depleted D Redox Depleted D Redox Depleted D Vernal Poo	natrix (F3) k Surface (F6 Dark Surface (Dressions (F8) Ils (F9)	6) (F7))		Of	her (Exp tors of hy	ain in Re drophytic	marks) : vegetatio	n and
_ Sandy G	sleyed Watrix (54)						wet	land hydi	ology mu	st be pres	ent.
Sandy G Restrictive L Type: Depth (ind	Layer (if present):		-				wet	land hydi	ology mu	st be pres	ent.
Sandy G Restrictive I Type: Depth (ind Remarks:	Layer (if present):		-	405			wet	land hydi Soil Pres	ent?	st be pres	ent. No
Sandy G testrictive I Type: Depth (inc emarks: 'DROLOG	Ches):	5 O1	ma	ottles	>		Wet	land hydi	ent?	st be pres	ent. No
Sandy G lestrictive I Type: Depth (ind emarks: /DROLOO	Ches): NO Or GY trology Indicators:	5 01	ma	ottles	>		Hydric	Soil Pres	ent?	st be pres	ent. No
Sandy G Restrictive I Type: Depth (inc emarks: /DROLOG	Ches): Ches): GY GY drology Indicators: eators (any one indicator)	5 O f	- - -	ottles	>		Wet Hydric	Soil Pres	ient?	st be pres	No V
Sandy G Restrictive I Type: Depth (ind temarks: //DROLOG //etland Hyd rimary Indic Surface V Surface V Saturatio Saturatio Sedimen Drift Dep Surface S Surface S Surface S Surface S 	GY GY GY GY drology Indicators: ators (any one indicators) ators (any one indicators) ators (A1) ter Table (A2) on (A3) arks (B1) (Nonriverine t Deposits (B2) (Nonriverine Soil Cracks (B6) on Visible on Aerial Ima ained Leaves (B9) rations:	or is sufficien e) verine) e) agery (B7)	nt) Salt Crust Biotic Crust Aquatic In Aquatic In Hydrogen Oxidized F Presence Recent Iro Other (Exp	(B11) st (B12) vertebrates (I Sulfide Odor Rhizospheres of Reduced Iu n Reduction of Reduced Iu n Reduction oblain in Rema	B13) (C1) s along L ron (C4) in Plowe arks)	ving Root d Soils (C	wet	econdary Soil Pres Condary Water Sedim Drift D Draina Dry-Se Thin M Crayfis Satura Satura Shallov FAC-N	Indicator Marks (B ent Depo eposits (E ge Patter eason Wa uck Surfa th Burrow tion Visib v Aquitan eutral Te	st be pres <u>res</u> <u>res</u> <u>1) (Riverin</u> sits (B2) (F 3) (Riverinns (B10) ter Table (ace (C7) s (C8) le on Aeria d (D3) st (D5)	ent. No V re required) ne) Riverine) ne) C2) Il Imagery (CS

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Vartnaw Landing	City/County Patelanas CA anis alulal
Applicant/Owner: Geoff McComit	States 014 Sampling Date: 24121
Investigator(s): Locer Macmillan	Section, Township, Range:
Landform (hillslope, terrace, etc.):	
Subregion (LRR): LRRC Lat:	Long: Slope (%): 1-2-70
Soil Map Unit Name: Yolo Clay Joan	0-5°/s Sloce NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	par? Yes No (If no evolution in Romatica)
Are Vegetation, Soil, or Hydrology significantly	disturbed? No Are "Normal Circumstances" present? Ves
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Hydric Soil Wetland Hy	: Vegetation Present? Present? drology Present?	Yes Yes Yes		Is the Sam within a We	pled Area etland?	Yes	No	
Remarks:	Ramfail	nowever	has	been 1	ress	30 far		

VEGETATION

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Tree Stratum (Use scientific names)	Absolute	Dominant	Indicator	Dominance Test worksheet:
12	<u>% Cover</u>	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant Species Across All Strata: 2 (B)
Sapling/Shrub Stratum	Cover:			Percent of Dominant Species 50 (A/B)
2			_	Prevalence Index worksheet: Total % Cover of: Multiply by:
3				OBL species x 1 = FACW species x 2 =
Herb Stratum Total C	Cover:			FAC species $\underline{\$0}$ x 3 = $\underline{240}$ FACU species $\underline{1}$ x 4 = $\underline{1}$
1. Vince major 2.	10	4	UPL	UPL species0 $x5 = 50$ Column Totals:(A)290(B)
3				Prevalence Index = B/A = 3.2
5				Hydrophytic Vegetation Indicators: Dominance Test is >50%
6				Prevalence Index is ≤3.0 ¹
8				Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum	over:			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Rubus armeniacus	80	Y	PAC	¹ Indicators of hydric soil and wetland hydrology must be present.
70tal C	over: <u>%0</u> over of Biotic Cru	ist_Ø		Hydrophytic Vegetation Present? Yes No

SOIL

Com	m	ina	Dair	
Sall	IDI	nu	POI	н.

OIL	Sampling Point:
Profile Description: (Describe to the depth needed to document the in	ndicator or confirm the absence of indicators.)
Depth Matrix Redox Features	
Incres) Color (moist) % Color (moist) %	Type' Loc ^e Texture Remarks
0-16 10 YR3/2 100	
	Plane Lista Do-Bast Obasa LM Mart
dric Soil Indicators: (Applicable to all LRRs, unless otherwise note	d)
Histosol (A1) Sandy Redoy (S5)	1 cm Muck (AQ) (LBB C)
Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10) (LRR C)
Black Histic (A3) Loamy Mucky Mineral	(F1) Reduced Vertic (F18)
_ Hydrogen Sulfide (A4) Loamy Gleyed Matrix ((F2) Red Parent Material (TF2)
_ Stratified Layers (A5) (LRR C) Depleted Matrix (F3)	Other (Explain in Remarks)
_ 1 cm Muck (A9) (LRR D) Redox Dark Surface (F	=6)
_ Depleted Below Dark Surface (A11) Depleted Dark Surface	e (F7)
_ Thick Dark Surface (A12) Redox Depressions (F	8)
_ Sandy Mucky Mineral (S1) Vernal Pools (F9)	Indicators of hydrophytic vegetation and
_ Sandy Gleyed Matrix (S4)	the second se
estrictive Laver (if present):	wetland hydrology must be present.
estrictive Layer (if present):	wetland hydrology must be present.
estrictive Layer (if present): Type:	wetland hydrology must be present.
estrictive Layer (if present): Type: Depth (inches): emarks:	Hydric Soil Present? Yes No
Estrictive Layer (if present): Type: Depth (inches): emarks:	Hydric Soil Present? Yes No
Petrictive Layer (if present): Type: Depth (inches): Pemarks: Pemarks: Performation of the second sec	
estrictive Layer (if present): Type: Depth (inches): emarks:	Wetland hydrology must be present. Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
estrictive Layer (if present): Type: Depth (inches): emarks: //DROLOGY //etland Hydrology Indicators: rimary Indicators (any one indicator is sufficient) Surface Water (A1) Salt Crust (B11)	Wetland hydrology must be present. Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
estrictive Layer (if present): Type: Depth (inches): Depth (inches): emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficient)	Wetland hydrology must be present. Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
estrictive Layer (if present): Type: Depth (inches): emarks:	Wetland hydrology must be present. Hydric Soil Present? Yes No Becondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B10)
estrictive Layer (if present): Type: Depth (inches): Demarks: Permarks: 2 2 2 2 2 2 2 2 2 2 2 2	Wetland hydrology must be present. Hydric Soil Present? Yes No Hydric Soil Present? Yes No Water Soil Present? Yes No Water Marks (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) or (C1) Dry-Season Water Table (C2)
estrictive Layer (if present): Type: Depth (inches): marks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficient) _ Surface Water (A1) _ Salt Crust (B11) _ High Water Table (A2) _ Biotic Crust (B12) _ Saturation (A3) _ Aquatic Invertebrates _ Water Marks (B1) (Nonriverine) _ Hydrogen Sulfide Odd _ Sediment Deposits (B2) (Nonriverine) _ Oxidized Rhizosphered	Wetland hydrology must be present. Hydric Soil Present? Yes No Hydric Soil Present? Yes No Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) or (C1) Dry-Season Water Table (C2) es along Living Roots (C3)
estrictive Layer (if present): Type: Depth (inches): emarks:	Wetland hydrology must be present. Hydric Soil Present? Yes No Hydric Soil Present? Yes No Must be present. Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
estrictive Layer (if present): Type: Depth (inches): emarks: //DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odd Sediment Deposits (B2) (Nonriverine) Oxidized Rhizosphere Drift Deposits (B3) (Nonriverine) Presence of Reduced Surface Soil Cracks (B6) Recent Iron Reductio	Wetland hydrology must be present. Hydric Soil Present? Yes No
estrictive Layer (if present): Type: Depth (inches): emarks:	Wetland hydrology must be present. Hydric Soil Present? Yes No
estrictive Layer (if present): Type: Depth (inches): emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficient)	Wetland hydrology must be present. Hydric Soil Present? Yes No Hydric Soil Present? Yes No Water Soil Present? Yes No Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Or (C1) Drainage Patterns (B10) or (C1) Dry-Season Water Table (C2) es along Living Roots (C3) Thin Muck Surface (C7) d Iron (C4) Crayfish Burrows (C8) n in Plowed Soils (C6) Saturation Visible on Aerial Imagery (C9 marks) Shallow Aquitard (D3) FAC-Neutral Test (D5)
estrictive Layer (if present): Type: Depth (inches): emarks: //DROLOGY //etland Hydrology Indicators: rimary Indicators (any one indicator is sufficient) 	Secondary Indicators (2 or more required)
estrictive Layer (if present): Type: Depth (inches): emarks: //DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficient) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odd Sediment Deposits (B2) (Nonriverine) Oxidized Rhizosphere Drift Deposits (B3) (Nonriverine) Presence of Reduced Surface Soil Cracks (B6) Recent Iron Reductio Inundation Visible on Aerial Imagery (B7) Other (Explain in Ren Water-Stained Leaves (B9) ield Observations: urface Water Present? Yes No Depth (inches):	Wetland hydrology must be present. Hydric Soil Present? Yes No
estrictive Layer (if present): Type: Depth (inches): emarks:	Wetland hydrology must be present. Hydric Soil Present? Yes No
Image: Instant Sector Secto	Wetland hydrology must be present. Hydric Soil Present? Yes No Hydric Soil Present? Yes No Hydric Soil Present? Yes No Secondary Indicators (2 or more required)

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Vartnaw Landing	City/County: Petroloma CA Sampling	Date: 2421
Applicant/Owner: GEOFF McComit	State: CAA Sampling	Point: 4
Investigator(s): Locer Macmillan	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	_ Local relief (concave, convex, none):	Slope (%): 1-2-0/0
Subregion (LRR):Lat: Lat:	Long:	Datum:
Soil Map Unit Name: Yolo clay loam	0-5-10 pe_ NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks)	
Are Vegetation, Soil, or Hydrology significantly	y disturbed? No Are "Normal Circumstances" present?	Yes No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? 🔀 (If needed, explain any answers in Rema	arks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Hydric Soil I Wetland Hyd	Vegetation Present? Present? drology Present?	Yes Yes Yes		Is the Sampled Area within a Wetland?	Yes	No
Remarks:	Ramfail	nowever	has	been less	30 far	

VEGETATION

2 (A) 2 (B) 160 (A/B
2 (B)
160 (A/B
Multiply by:
1=
2 =
3 =
4 =
5 =
A) (B)
ators:
(Provide supporting separate sheet)
egetation ¹ (Explain)
Second (and and
tland hydrology must
No

SOIL

Sam	plina	Point:

4

Profile Description: (Describe to the dept	h needed to document the indicator or	r confirm the absence of indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type'	Loc ² Texture Remarks
0-14/6 104/03/3 160		sifty clay loan
Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Reduced Matrix. ² Location: PL=Pore LRRs, unless otherwise noted.)	Lining, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
lestrictive Layer (if present):		
Туре:		
Depth (inches):		Hydric Soil Present? Yes No
YDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is suffi	cient)	Water Marks (B1) (Riverine)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B3) Water-Stained Leaves (B9) Eicled Observationse:	 Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plowe Other (Explain in Remarks) 	 Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) iving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream cause, mer.)	No Depth (inches): No Depth (inches): No Depth (inches):	Wetland Hydrology Present? Yes No
beschibe Necolden Data (stream gauge, mo	nitoring weil, aenai priotos, previous inspi	ections, il available.
Remarks:		

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Vartnaw Landing	City/County: Peterlesson CA Sampling Date: 2/24/2/
Applicant/Owner: GEOFF McComit	State: OAA Sampling Date
Investigator(s): Locer Macmillan	Section, Township, Range:
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):
Subregion (LRR):Lat:Lat:	
Soil Map Unit Name: Yolo clay loam	0-5% STOPE NWI classification
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology significantly	disturbed? No Are "Normal Circumstances" present? Yes
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Hydric Soil I Wetland Hyd	Vegetation Present? Present? drology Present?	Yes Yes Yes		Is the Sampled Area within a Wetland?	Yes	No
Remarks:	Rainfail	nowever	has	been less	20 far	

VEGETATION

Tree Stratum (Use scientific names.) 1. OUCLOS 2.	Absolute <u>% Cover</u> 5	Dominant Species?	Indicator Status UPL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
3		15	_	Total Number of Dominant Species Across All Strata:
Sapling/Shrub Stratum				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
2				Prevalence Index worksheet: Total % Cover of: Multiply by:
3				OBL species x1 = FACW species x2 =
5Total Cover:				FAC species x 3 =
1. <u>Aumex acetosella</u> 2.	5	1	UPL	UPL species
3				Prevalence Index = B/A =
4 5 6	_			Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3 0 ¹
7				 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Wasdu Viza Stratum				Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>RJOVS armiacis</u> 2.	90	Y	FAC	¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover: % Bare Ground in Herb Stratum % Cover of	9D of Biotic Cri	ust_Ø	-	Hydrophytic Vegetation Present? Yes No
Remarks:				Present? Yes No

SOIL

-			
Sam	pling	Point:	-

Depth Matrix	Redov Features	
(inches) Color (moist) %	Color (moist) % Type ¹	Loc ² Texture Remarks
A-16 1040 B/1 11		silly clay boy
te to the the		
· · · · · · · · · · · · · · · · · · ·		
Type: C=Concentration, D=Depletion,	, RM=Reduced Matrix. ² Location: PL=Pore I	Lining, RC=Root Channel, M=Matrix.
Hydric Soil Indicators: (Applicable t	o all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleved Matrix (F2)	Red Parent Material (TF2)
Stratified Lavers (A5) (LRR C)	Depleted Matrix (E3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Bedox Dark Surface (F6)	
Depleted Below Dark Surface (A11	1) Depleted Dark Surface (F7)	
Thick Dark Surface (A12)	Redox Depressions (E8)	
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	³ Indicators of hydrophytic vegetation and
Sandy Gleved Matrix (S4)		wetland hydrology must be present
Restrictive Laver (if present):		
Tuno:		
Denth (inches)		
Depth (inches):		Hydric Soil Present? Yes No
Type Depth (inches): Remarks:		Hydric Soil Present? Yes No
Type Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators:		Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	; sufficient)	Hydric Soil Present? Yes No
Type Depth (inches): Remarks: TYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1)	sufficient)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Denosits (B2) (Riverine)
Type. Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	sufficient) Salt Crust (B11)	Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Schuarting (A2)	sufficient) Salt Crust (B11) Biotic Crust (B12)	Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3)	sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	s sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Type. Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	 <u>sufficient</u>) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 'ine) Oxidized Rhizospheres along Liv 	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Type. Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	 <u>sufficient</u>) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 'ine) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) 	Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriver Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	 sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed 	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriver Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Image	 sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Line Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Other (Explain in Remarks) 	Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriver Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Water-Stained Leaves (B9)	S sufficient) S sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Other (Explain in Remarks)	Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriver Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations:	S sufficient) S sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Other (Explain in Remarks)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations: Surface Water Present?	S Sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Denth (inches):	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Type. Depth (inches): Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes	Sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Depth (inches): Depth (inches):	Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes	s sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Other (Explain in Remarks) No Depth (inches): Depth (inches):	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	Sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) No Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	Sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Depth (inches): No Depth (inches): Depth (inches): Depth (inches):	Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) iving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) d Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	s sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Depth (inches): No Depth (inches): e, monitoring well, aerial photos, previous inspecies	Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) iving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) d Soils (C6) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type. Depth (inches): Remarks: Remarks: Remarks: Image: Second State		Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: Remarks: Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is		Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	s sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) ine) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Other (Explain in Remarks) No Depth (inches): Depth (inches): e, monitoring well, aerial photos, previous inspective	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is	s sufficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Other (Explain in Remarks) No Depth (inches): Depth (inches): e, monitoring well, aerial photos, previous inspectively	Hydric Soil Present? Yes No
Type. Depth (inches): Remarks: Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Mater Table Present? Yes Saturation Present? Yes Remarks: Remarks:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) rine) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed ry (B7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): e, monitoring well, aerial photos, previous inspectively and the second secon	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Vartnaw Landing	City/County: Petalona CA Sampling Date: 2/4/2/
Applicant/Owner: Graff McComit	State: Sampling Point: 6
Investigator(s): Locer Macmillan	_ Section, Township, Range:
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): Slope (%): 1-2-0/c
Subregion (LRR): Lat: Lat:	Long: Datum:
Soil Map Unit Name: Yolo clay loam	0-5-10 Slope NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No (If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? No Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pl	roblematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Hydric Soil I Wetland Hy	Vegetation Present? Present? drology Present?	NA Yes Yes Yes		Is the Sampled Area within a Wetland?	Yes	No
Remarks:	Rainfail	however	has b	tern less	30 far	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator	Dominance Test worksheet:	
1				Number of Dominant Species That Are OBL, FACW, or FAC: (A)	
2				Total Number of Dominant	
3				Species Across All Strata: (B)	
4				Percent of Dominant Species	
Sapling/Shrub Stratum				That Are OBL, FACW, or FAC: (A/B	()
1		_		Prevalence Index worksheet:	-
2				Total % Cover of:Multiply by:	
3				OBL species x 1 =	
4				FACW species x 2 =	
5				FAC species x 3 =	
Horb Stratum				FACU species x 4 =	
	1000	1	NIA	UPL species x 5 =	
2	100		AR	Column Totals: (A) (B)	1
3	-			Prevalence Index = B/A =	
4	-			Hydrophytic Vegetation Indicators:	-
5		· · · · · ·		Dominance Test is >50%	
6				Prevalence Index is ≤3.0 ¹	
7				Morphological Adaptations ¹ (Provide supporting	
8				data in Remarks or on a separate sheet)	
Total Cover:				Problematic Hydrophytic Vegetation (Explain)	
vvoddy vine Stratum				1 martine and the state of the	
l				be present.	
Z					-
% Bare Ground in Herb Stratum % Cover	of Biotic Cr	ust		Vegetation Present? Yes No	
Remarks:	and works				-
			1		

SOIL

Sampling Daint

(inches) Orly ()	Redox Features	
Color (moist) % O-16	Color (moist) % Type¹ L	<u>-oc²</u> <u>Texture</u> <u>Remarks</u> <u>ST HY</u> <u>Clay</u> <u>Log</u> <u>Clay</u> <u></u>
Type: C=Concentration, D=Depletion, RM lydric Soil Indicators: (Applicable to all Histosol (A1)	=Reduced Matrix. ² Location: PL=Pore Li LRRs, unless otherwise noted.)	ning, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils ³ :
 Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) 	 Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) 	 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type:	Vernal Pools (F9)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
Depth (inches):		Hydric Soil Present? Yes No
Remarks: No mot	hes or oxidized	rnizospheres
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
승규는 동작값을 제공해 실험을 가져야 한다. 다 다 다	icient)	Water Marks (B1) (Riverine)
Primary Indicators (any one indicator is suffi		

Water-Stained Leaves	erial image (B9)	ry (B7)	Other (Explain	in Remarks)	Shallow Aquitard (D3) FAC-Neutral Test (D5)
Field Observations:			1		
Surface Water Present?	Yes	No/	Depth (inches):	
Water Table Present?	Yes	No/	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	No	_ Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (st	ream gaug	e, monitoring	well, aerial photo	os, previous	inspections), if available:
Remarks:		30/16	wet	N	15"

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Vartnaw Landing	City/County: Petrologo CA Sampling Date: 214121
Applicant/Owner: GEOFF McComit	State: CAA Sampling Point: 7
Investigator(s): Locer Macmillan	Section, Township, Range:
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): DODE Slope (%): 1-2-0/0
Subregion (LRR): Lat: Lat:	Long: Datum:
Soil Map Unit Name: Yolo clay loam	0-5-10 STOPE NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks)
Are Vegetation, Soil, or Hydrology significantly	disturbed? No Are "Normal Circumstances" present? Yes
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? No (If needed, explain any answers in Remarks.)
SUMMARY OF EINDINGS Attach alto man altouring	

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Hydric Soil Wetland Hy	Vegetation Present? Present? drology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	_ No	
Remarks:	Rainfail	nowever	has	been less	30 far		

VEGETATION

Tree Stratum (Lico scientific nomes)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1	<u>% Cover</u>	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
3				Total Number of Dominant
4.				Species Across All Strata: [B]
Sapling/Shrub Stratum	r:			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of:Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =
5	12.			FAC species x 3 =
Total Cove	r.			FACU species x 4 =
Herb Stratum				UPL species x 5 =
1				Column Totals: (A) (B)
2			-	
3				Prevalence Index = B/A =
4				Hydrophytic Vegetation Indicators:
5				Dominance Test is >50%
6		_		Prevalence Index is ≤3.0 ¹
8.				Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Total Cause			-	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum	b			
1. Rubus armeniacus	~80	Y	PAC	¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover % Bare Ground in Herb Stratum <u>Model</u> % Cover	r: Sol	rust		Hydrophytic Vegetation Present? Yes No
Remarks:				

C	0	τ.
э	U	ᄂ

Sampling	Point:

Depth Matrix	Redox Features	
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type¹</u>	_oc ² Texture Remarks
0-16 10410312 100		_ similar lar
		· · · · · · · · · · · · · · · · · · ·
ype: C=Concentration, D=Depletion, R	M=Reduced Matrix. ² Location: PL=Pore Li	ining, RC=Root Channel, M=Matrix
ydric Soil Indicators: (Applicable to a	II LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
_ Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
_ Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
_ Hydrogen Sumde (A4) Stratified Lawers (A5) (LBB C)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
1 cm Muck (A9) (LRR D)	Depleted Matrix (F3) Redox Dark Surface (F6)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	³ Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)		wetland hydrology must be present.
estrictive Layer (if present):		
Туре:		
Donth (inchor):		
Deptil (inclies).		Hydric Soil Present? Yes No
lemarks:		Hydric Soil Present? Yes No
Pepar (incles):		Hydric Soil Present? Yes No
/DROLOGY /etland Hydrology Indicators:		Hydric Soil Present? Yes No
Peper (incres): emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is su	fficient)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Peppin (incres): emarks: //DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is su Surface Water (A1)	fficient) Salt Crust (B11)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
TOROLOGY Tetland Hydrology Indicators: Timary Indicators (any one indicator is su Surface Water (A1) High Water Table (A2)	fficient) Salt Crust (B11) Biotic Crust (B12)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Deptr (incres) . Constant of the second 	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
DROLOGY Vetland Hydrology Indicators: trimary Indicators (any one indicator is su _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) (Nonriverine)	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
The purphy (increase). The purphy is a constraint of the purphy i	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)) Oxidized Rhizospheres along Livi	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Peptr (Inches). emarks: Provide the second state of the second s	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) ing Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)
emarks: //DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is su _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) (Nonriverine) _ Sediment Deposits (B2) (Nonriverine) _ Drift Deposits (B3) (Nonriverine) _ Surface Soil Cracks (B6)	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed B7) Other (Explain in Remarks)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
ZDROLOGY Vetland Hydrology Indicators: rimary Indicators (any one indicator is su Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Water-Stained Leaves (B9)	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed B7) Other (Explain in Remarks)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Peptr (incres): emarks: Provide the second state of the s	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed B7) Other (Explain in Remarks)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed B7) Other (Explain in Remarks) No Depth (inches):	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Zorophi (incres):	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed B7) Other (Explain in Remarks) No Depth (inches): Depth (inches):	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
	fficient)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Jepth (Inches). emarks: //DROLOGY //etland Hydrology Indicators: rimary Indicators (any one indicator is su	fficient)	Hydric Soil Present? Yes No
Peptr (niches): emarks: // IROLOGY // etland Hydrology Indicators: rimary Indicators (any one indicator is su	fficient)	Hydric Soil Present? Yes No //////////////////////////////
/DROLOGY Vetland Hydrology Indicators: 'rimary Indicators (any one indicator is su	fficient)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Jepth (incres). temarks: //DROLOGY //etland Hydrology Indicators: rimary Indicators (any one indicator is su	fficient)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Jepth (inches). emarks: //DROLOGY //etland Hydrology Indicators: rimary Indicators (any one indicator is su	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livi Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed B7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches): nonitoring well, aerial photos, previous inspect	Hydric Soil Present? Yes No
Jeptif (incres). temarks: Yordinand Hydrology Indicators: trimary Indicators (any one indicator is su	fficient)	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)

WETLAND DETERMINATION DATA FORM – Arid West Region

÷.

Project/Site:Vav+nan	Landing	City/County: Petrolesona CA Sampling Data: 2/2/2/
Applicant/Owner: Groff	McComit	State: OA Sampling Dalet
Investigator(s): Locer Ma	acmillan	Section, Township, Ranger
Landform (hillslope, terrace, etc.):		Local relief (concave convex none): Doole class (a) 1529/2
Subregion (LRR):	Lat:	
Soil Map Unit Name:	clay loam	
Are climatic / hydrologic conditions o	on the site typical for this time of	of year? Yes No. (If no explain in Remark)
Are Vegetation, Soil,	or Hydrology significa	antly disturbed? No Are "Normal Circumstances" property. May him
Are Vegetation, Soil,	or Hydrology naturally	v problematic? No //f needed explain any ensurem in Remarkable
SUMMARY OF FINDINGS -	Attach site map show	ing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No	Is the Sampled Area within a Wetland? Yes No
Remarks: Rainfail	nowever ha	s been less so far.

VEGETATION

1	10 00001	Opecies:	Jaius	Number of Deminent Creation
2				That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant Species Across All Strate:
4				
Sapling/Shrub Stratum				Percent of Dominant Species That Are OBL, FACW, or FAC:(OO (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x1 =
4				FACW species x 2 =
5				FAC species x 3 =
Total Cover:		8		FACU species x 4 =
Herd Stratum				UPL species x 5 =
				Column Totals: (A) (B)
3				Prevalence Index = B/A =
ł				Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
				Prevalence Index is ≤3.0 ¹
7				Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
Voody Vine Stratum				Problematic Hydrophytic Vegetation ¹ (Explain)
Rubus armenicats	90	Y	mac	¹ Indicators of hydric soil and wetland hydrology must
Tatle				
6 Bare Ground in Herb Stratum N 0 % Cover	of Biotic Cru	ust_Ø		Hydrophytic Vegetation Present? Yes No
Remarks:		1		

SOIL

Compline	Daint	Q
Sampling	Point:	 \bigcirc

	Redox Features	
(inches) Color (moist) % G-16 10 N/C3/2 100	Color (moist) % Type ¹	Loc ² Texture Remarks
Type: C=Concentration, D=Depletion, RM= ydric Soil Indicators: (Applicable to all I Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D)	Reduced Matrix. ² Location: PL=Pc LRRs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	Dre Lining, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
 Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) 	 Depleted Dark Surface (F7) Redox Depressions (F8) Vernal Pools (F9) 	³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
Type: Depth (inches):		
Remarks:		Hydric Soll Present? Yes No
emarks: DROLOGY etland Hydrology Indicators:		Secondary Indicators (2 or more required)
emarks: DROLOGY etland Hydrology Indicators: imary Indicators (any one indicator is suffici _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) (Nonriverine) _ Sediment Deposits (B2) (Nonriverine) _ Drift Deposits (B3) (Nonriverine) _ Surface Soil Cracks (B6) _ Inundation Visible on Aerial Imagery (B7) _ Water-Stained Leaves (B9)	ient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Plov Other (Explain in Remarks)	Hydric Soll Present? Yes No Secondary Indicators (2 or more required)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is suffici _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) (Nonriverine) _ Sediment Deposits (B2) (Nonriverine) _ Drift Deposits (B3) (Nonriverine) _ Surface Soil Cracks (B6) _ Inundation Visible on Aerial Imagery (B7) _ Water-Stained Leaves (B9) eld Observations: urface Water Present? Yes No ater Table Present? Yes No ater Table Present? Yes No ater Table Present? Yes No cludes capillary fringe) iscribe Recorded Data (stream gauge, monitive)	ient) Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Plov Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Hydric Soll Present? Yes No Secondary Indicators (2 or more required)
Arrow Stress Yetland Hydrology Indicators: rimary Indicators (any one indicator is sufficing) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) eld Observations: urface Water Present? Yes No aturation Present? Yes No	ient) Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Plow Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Hydric Soll Present? Yes No Secondary Indicators (2 or more required)

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Vartnan Landing	City/County Peller Q A
Applicant/Owner: Groff McComit	Sampling Date: 214121
Investigator(s): Locer Macmillan	Section Township Range:
Landform (hillslope, terrace, etc.):	local relief (annual second se
Subregion (LRR): LRRC	Local feller (concave, convex, none): Slope (%): 1-2-9/o
Soil Map Unit Name: Yolo Clay Loam	Long: Datum:
Are climatic / hydrologic conditions on the site typical for this time of w	Par2 Yes Ala Market Ala
Are Vegetation, Soil, or Hydrology significantly	(disturbed? No (If no, explain in Remarks))
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? No //f needed explain any assume is D
SUMMARY OF FINDINGS - Attach site map showing	J sampling point locations, transects, important footures, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	Is the Sampled Area

Hydric Soil Wetland Hy	Present? /drology Present?	Yes Yes	No No	ls the S within a	ampled Area Wetland?	Yes	_ No
Remarks:	Rainfail	however	has	been	less	30 far.	
-							

VEGETATION

Tree Stratum (Use scientific names.) 1. OLA 2.	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status UPL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant Species Across All Strata:
Sapling/Shrub Stratum	er: 10			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1 2				Prevalence Index worksheet: Total % Cover of:
3				OBL species x 1 = EACM/encodes x 1 =
5 Total Cove	r:			FAC species x 2 = FAC species x 3 =
12.				UPL species $10 \times 5 = 50$ Column Totals: $1/60$ (A) 350 (B)
3				Prevalence Index = $B/A = 3.2$ (B)
5				Hydrophytic Vegetation Indicators: Dominance Test is >50%
78				Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting
Woody Vine Stratum Total Cover				Problematic Hydrophytic Vegetation ¹ (Explain)
1. RUBUS armeniacos	100	Y	THE	¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover: % Bare Ground in Herb Stratum % Cover	of Biotic Cru	st		Hydrophytic Vegetation Present? Yes No
Remarks:				

SOIL

	epth needed to document the indicator	Sampling Point:
Matrix Color (moist) % Color (Moist) % Or 16 164123/2 100	<u>Redox Features</u> <u>Color (moist)</u> <u>%</u> <u>Type</u> ¹ <u>Lo</u> <u>MRMM</u> <u>7.5VR/4</u> <u>49</u> <u>M</u>	<u>Texture</u> <u>Remarks</u> <u>Silf y Clay [Carrow]</u>
Type: C=Concentration, D=Depletion, Rl ydric Soil Indicators: (Applicable to a	M=Reduced Matrix. ² Location: PL=Pore Linin II LRRs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Vernal Pools (F9)	ng, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
estrictive Layer (if present):		

HYDROLOGY

	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Oxidized Rhizospheres along Living Roots Oxidized Rhizospheres O	Drainage Patterns (B10) Dry-Season Water Table (C2) (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) EAC-Neutral Taget (D5)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Vincludes capillary fringe) No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if a Remarks:	d Hydrology Present? Yes No

Appendix C – CNDDB Printout

									chadb												
SNAME	CNAME	ELMCODE	OCCNUMBER	MAPNDX	EONDX	KEYQUAD	KQUADNAME	KEYCOUNTY	PLSS	ELEVATION	PARTS	ELMTYPE	TAXONGROUP	EOCOUNT	ACCURACY	PRESENCE	OCCTYPE	OCCRANK	SENSITIVE	SITEDATE	ELMDATE
Lifum pardalinum ssp. pitkinense	Pitkin Marsh By	PMLIL1A0H3	4	20323	93011	3812226	Petaluma	SON		0	1	1	Monocots	12	1 mile	Extirpated	Natural/Native occurrence	None	Y	188006300	188006XX
Ambystoma californiense	California tiper salamander	AAAAA01180	1135	94460	91221	3812226	Petaluma	SON	T05N, R07W, Sec. 33 (M)	0	1		Amphibians	1	5 miles	Possibly Extirpated	Natural/Native occurrence	None	N	1856XXXX	1856XXXX
Piearia rigaria	hork surgleau	APPA1 (09010	200	94466	95492	2912224	Sasama	SON	TOEN DOEW See, 10 MB	25			Diete		E mise	Percurrent Extent	Natural/Native occurrence	Linknown	N	19030522	19020522
ropana ripana	Darik swałów	ADPADUGUTU	290	04400	00402	3612234	Schoma	SUN	TUDIN, HUDIN, ONC. 19 (M)	20			: Dirus		5 miles	Presumed Extent	Natural Native occurrence	CHIMIDWIT	N	18930323	16930523
Emys marmorata	western pond turtle	ARAAD02030	599	54282	54282	3812225	Petaluma River	SON		130	1		Preptiles	1	80 meters	Presumed Extant	Natural/Native occurrence	Good	Y	20040115	20040115
Reithrodontomys raviventris	salt-marsh harvest mouse	AMAFF02040	18	8474	14562	3812225	Petaluma River	SON	T04N, R06W, Sec. 20 (M)	3	1	1	2 Mammals	3	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	2005XXXX	2005XXXX
Coastal Brackish Marsh	Coastal Brackish Marsh	CTT52200CA	1	8474	16109	3812225	Petaluma River	SON	T04N, R06W, Sec. 20 (M)	0	1	5	8 Marsh	3	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	197706XX	197706XX
Tryonia imitator	mimic tryonia («California brackishwater snail)	IMGASJ7040	13	8474	57939	3812225	Petaluma River	SON	T04N, R06W, Sec. 20 (M)	6	1		Mollusks	3	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	1984XXXXX	1984XXXXX
Relius obsoletus obsoletus	California Ridoway's rail	ABNME05011	105	61749	61785	3812225	Petakima River	SON	TOAN ROEW Sec. 18 (M)	3	1		Rints	1	non-specific area	Presumed Extent	Natural/Native occurrence	Evcellent	N	20140324	20140324
Goothhmic trishos sinuosa		40000044		00000	44004	0040000	Database Diver	0.001	TO (1) DOCH ON 10 40 40	-			Dist.			Descurred Dataset	Net and Alation and an and	Constant		00040504	00040504
Geodiffer dicting andora	satimation common yearbwithdat	ABPBAIZUIA	50	33609	14004	3612225	Pelaunia river	SUN	TOHIN, MUGIN, ONC. 16 (M)	0		- '	Deus		non-specific area	Presumed Extent	Natural Native occurrence	Excelent	IN	20040821	20040521
Melospiza melodia samuelis	San Pablo song sparrow	ABPBXA301W	25	61026	61062	3812225	Petaluma River	SON	T05N, R07W, Sec. 34 (M)	4	1		2 Birds	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19401006	19401006
Bombus occidentalis	western bumble bee	IIHYM24250	171	98473	99903	3812225	Petaluma River	MRN	T04N, R07W, Sec. 24 (M)	85	1		Insects	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19601001	19601001
Taxidea taxus	American badger	AMAJF04010	233	57122	57138	3812225	Petaluma River	SON	T04N, R07W, Sec. 14 (M)	200	1	1 2	Mammals	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19490720	19490720
Centromadia parryi ssp. parryi	pappose tarplant	PDAST4R0P2	13	56476	56492	3812236	Cotati	SON	T05N, R07W, Sec. 09 (M)	80	1	1	Dicots	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	1987XXXX	1987XXXX
Rana bovlii	foothill vellow-legged frog	AAABH01050	1837	A8964	110772	3812236	Cotati	SON	T05N, R07W, Sec. 7 (M)	57	1		Amphibians	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19870903	19870903
Rombus oscidentalis	watten humble bee	IIII/0424260	160	20222	00907	2912226	Betakuma	90NI	TOEN D07W Sec. 22.88	90	- 1		Incocte	12	1 mile	Bencumed Extent	Notural/Native occurrence	Linknown	N	10651021	10651021
Astronomic Constitution	all all with out the	0054005004	105	00000	0000	0010000	Detabutta	001	TOCH, NOTH, OLC. 30 (II)	00			Directo	10	4	Fidurated Court	Natural Alation occurrence	kines		10001021	10000100
Astragaius tener var. tener	akai mik-vech	PDPADOFONI	39	20323	9269	3612220	reauma	SUN	TUDIN, HU/W, ONC. 33 (W)	30			Dicola	12	1 mag	Exerpated	Natural Native occurrence	NONE	N	12000000	10000477
Taricha rivularis	red-bellied newt	AAAAF02020	136	20323	104578	3812226	Petaluma	SON	T05N, R07W, Sec. 33 (M)	20	1		2 Amphibians	12	1 mie	Presumed Extant	Natural/Native occurrence	Unknown	N	X0000000K	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Sidalcea calycosa ssp. rhizomata	Point Reyes checkerbloom	PDMAL11012	10	20323	9268	3812226	Petaluma	SON	T05N, R07W, Sec. 33 (M)	30	1	1	Dicots	12	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	18800506	18800506
Fritillaria Iliacea	fragrant fritiliary	PMLIL0V0C0	83	20323	94662	3812226	Petaluma	SON	T05N, R07W, Sec. 33 (M)	0	1	1	Monocots	12	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	18800403	18800403
Corvnorhinus townsendii	Townsend's bio-eared bat	AMACC08010	445	20323	93632	3812226	Petaluma	SON	T05N, R07W, Sec. 33 (M)	30	1	1	Mammala	12	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19381009	19381009
Planinhothrys mollis var vestitus	Petaluma poppornflower	PDBOB0V002	1	20323	9265	3812226	Petakima	SON	T05N R07W Sec 33 (M)	20	1		Dicots	12	1 mile	Possibly Extirnated	Natural/Native occurrence	None	N	188007307	188007XX
Ob a character of the	Concerns and a first state	00000104040		00000	0000	0040000	Detelana	0.041	TOCH DOTH C++ 00.85				Diam'r	40	4	Describby Definition	Matural Alation and an and	hinne			10000000
				20023	ar JO	001220				30	-	- '		12		- compared	- and an resorve occurrence				
memizonia congesta ssp. congesta	congested-neaded nayfield tarplant	r/UA31/4R065	38	20323	101/811	3812226	retatuma	oUN	100N, H0/W, Sec. 33 (M)	20	1	,	LACOTS	12	i mee	rresumed Extant	matural/Native occurrence	Unknown	ni	XXXXXXXX	NOOCHER
Allium peninsulare var. franciscanum	Franciscan onion	PMLIL021R1	10	20323	45129	3812226	Petaluma	SON	T05N, R07W, Sec. 33 (M)	0	1	1	Monocots	12	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	18800602	18800602
Trifolium polyodon	Pacific Grove clover	PDFAB402H0	24	20323	113568	3812226	Petaluma	SON	T05N, R07W, Sec. 33 (M)	20	1	1	Dicots	12	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	X0000000X	X0000000X
Polygonum marinense	Marin knotweed	PDPGN0L1C0	3	8464	20964	3812225	Petaluma River	MRN	T04N, R06W, Sec. 30 (M)	5	1	1	Dicots	1	1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19450708	19450708
Laterallus jamaicensis coturniculus	California black rail	ABNME03041	213	76085	77080	3812225	Petaluma River	SON	T04N, R06W, Sec. 19 (M)	7	1		Birds	1	non-specific area	Presumed Extant	Natural/Native occurrence	Excellent	N	20110409	20110409
Putoo sumineoni	Sunisson's bauk	APAKC 10070	2574	04477	015/0	0010000	Botaluma	90N	TOAN DOTW See 22.65	100			Diete		000.000030	Barelbh: Externation	Natural/Native or our	Noos	N	19567777	19567777
Dates sharpon	ownerson a flaws	ALINENG 190/0	20/1	9444/	91049	3012226	Comp Dated	0.011	TOTAL DOCH ONE 44.5	120	1	l .	- Lords	1	non-specific area	Providence of State	Network Relative occurrence	1 Industrial		XAAABLUI	ANAABCUI
Bombus occidentalis	western bumble bee	IIHYM24250	296	B6149	11918/	3812224	Sears Point	SUN	TU4N, HUBW, Sec. 14 (M)	145	1		r Insects	1	non-specinic area	Presumed Extant	Natural/Native occurrence	Unknown	N	19530831	19530831
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	PDSCR0J0C3	61	42155	42155	3812225	Petaluma River	SON	T04N, R06W, Sec. 20 (M)	4	1	1	Dicots	1	3/5 mile	Presumed Extant	Natural/Native occurrence	Excellent	N	19930917	19930917
Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	AFCHA0209G	1	41863	41863	3812235	Glen Ellen	SON	T05N, R07W, Sec. 24 (M)	400	1	2	Fish	1	non-specific area	Presumed Extant	Natural/Native occurrence	Excellent	N	20160408	20160408
Rallus obsoletus obsoletus	California Ridgway's rail	ABNME05011	89	59159	59195	3812225	Petaluma River	SON	T04N, R06W, Sec. 29, SE (M)	10	3	2	Birds	1	non-specific area	Presumed Extant	Natural/Native occurrence	Good	N	20110505	20110505
Melospiza melodia samuelis	San Pablo song sparrow	ABPBXA301W	24	60748	60784	3812225	Petaluma River	SON	T04N, R06W, Sec. 19 (M)	0	1		Birds	1	2/5 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	1981XXXX	1981XXXX
Rana bovlii	foothill vellow-legged frog	AAABH01050	159	36971	31968	3812235	Glen Ellen	SON	T05N, R07W, Sec. 13 (M)	325	1		Amphibians	1	non-specific area	Presumed Extent	Natural/Native occurrence	Excellent	N	1998XXXX	19980000X
Laterallus iamaicensis coturniculus	California black rail	ABNME03041	216	76090	77085	3812225	Petakima River	SON	TOAN ROTW Sec 1 S M	0	1		Rints	1	non-specific area	Presumed Extent	Natural/Native occurrence	Good	N	20150318	20150318
Company and a state of the stat	and a second second second second second	40000044		40000	04000	0040000	Database Diver	0.001		-			Dist.			Descurred Dataset	Net and Alation and an and	Union		10050000	40000000
		ADI DATEUTA		TOULL	24000		T CONCINE TOPE		10014, 110714, 040, 04, 02 (H)				Leus .	-	inter-appectic area			Gildadani		120030000	12020000
Neithrodoniomys rawventris	sat-marsh harvest motoe	AMAPP02040	**	10022	23000	3612225	Pelauna river	SUN	105W, H07W, 54C. 34 (W)	•	- '		Mammad		non-specific area	Presumed Extent	Natura/Native occurrence	Chiciown	N	19901222	19901222
Laterallus jamaicensis coturniculus	California black rail	ABNME03041	215	16080	77084	3812225	Petaluma Hiver	SUN	104N, HU/W, Sec. 12, NE (M)	/	1		r Birds	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	20080527	20080527
Rallus obsoletus obsoletus	California Ridgway's rail	ABNME05011	115	97463	98760	3812225	Petaluma River	SON	T05N, R07W, Sec. 35, SW (M)	5	1		2 Birds	1	non-specific area	Presumed Extant	Natural/Native occurrence	Good	N	20140324	20140324
Trifolium amoenum	two-fork clover	PDFAB40040	19	8330	19163	3812226	Petaluma	SON	T04N, R07W, Sec. 09, W (M)	300	1	1	Dicots	2	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	19690526	19690526
Delphinium luteum	golden larkspur	PDRAN0B0Z0	2	8330	21638	3812226	Petaluma	SON	T04N, R07W, Sec. 09, W (M)	150	1	1	Dicots	2	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	19620419	19620419
Chloropyron molle ssp. molle	soft salty bird's-beak	PDSCR0J0D2	10	8469	17822	3812225	Petaluma River	SON	T04N, R06W, Sec. 19, SE (M)	0	1	,	Dicots	1	1/5 mile	Possibly Extirpated	Natural/Native occurrence	None	N	19930917	19781108
Hemizonia congesta ssp. congesta	congested-headed hayfield tarplant	PDAST4R065	13	72953	73865	3812236	Cotati	SON	T05N, R07W, Sec. 18 (M)	0	1		Dicots	1	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	19160723	19160723
Emrs marmorata	western nonri turtle	ARAAD02030	420	30180	4936	3812226	Petakima	SON	TOAN ROTW Sec. 18 S (M)	120	1		Rentiles	1	snerific area	Presumed Extent	Natural/Native occurrence	Fair	N	20020325	20020325
Emer marmorata	wastom pood turtio	ARAAD02020	12/0	0.4179	105955	2912226	Retakuma	SON	TO(N) D07W Sec. 9 SE (M)	272			Renting		specific area	Percurned Extent	Natural/Native occurrence	Excellent	N	20160725	20160725
	western ports to be	1000000000	1045		103033	3012120	T CORPORTER		TOTH, TOTH, OLC. 0, OL (N)	210			- Treprinta		apound area			E.A. STOR		20100723	20100725
Emys marmorata	western pond turbe	AHAADU2030	/64	/0/18	/162/	3812225	Petaluma Hiver	SUN	104N, H0/W, Sec. 01 (M)	15	1		r Heptiles	1	specific area	Presumed Extant	Natural/Native occurrence	Good	N	20070726	20070726
Pogonichthys macrolepidotus	Sacramento splittali	AFCJB34020	8	42851	42851	3812226	Petaluma	SON	T05N, R07W, Sec. 28 (M)	1	1		? Fish	1	specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	19990823	19990823
Rana draytonii	California red-legged frog	AAABH01022	353	42674	42674	3812226	Petaluma	SON	T04N, R07W, Sec. 06, NW (M)	200	1	1 1	2 Amphibians	1	non-specific area	Presumed Extant	Natural/Native occurrence	Good	N	20010918	20010918
Emys marmorata	western pond turtle	ARAAD02030	183	46159	46159	3812226	Petaluma	SON	T05N, R07W, Sec. 30, SW (M)	45	1		Papelles	1	non-specific area	Presumed Extant	Natural/Native occurrence	Good	N	20010524	20010524
Taxidea taxus	American badger	AMAJF04010	22	53938	53938	3812226	Petaluma	SON	T05N, R07W, Sec. 32, NW (M)	200	2		Mammala	1	specific area	Presumed Extent	Natural/Native occurrence	Fair	N	20090909	20090909
Laterallus ismaisancis optumisulus	Collegenia black coll	ADABAE02041	919	A9.649	105078	9919996	Retakuma River	SON	TOAN DOTW Sec. 2 NE MI	7	- 1		Diete		1/10 mile	Descurrent Extent	Notural/Native occurrence	Good	N	20120402	20120402
											-										
Lateratius jamaicensis coturniculus	Camorna diack rai	ABNME03041	312	A3439	1050/6	3812225	metatuma Hiver	ouN	104IN, HU/W, Sec. 2, NW (M)	4	1		Deds	1	1/10 mile	Presumed Extant	reasural/Native occurrence	0000	IN	20150318	20150318
Rana draytonii	California red-legged frog	AAABH01022	1461	A4177	105854	3812226	Petaluma	SON	T04N, R07W, Sec. 8, SE (M)	248	3		2 Amphibians	1	specific area	Presumed Extant	Natural/Native occurrence	Excellent	N	20160805	20160805
Rana boylii	foothill yellow-legged frog	AAABH01050	1838	A8966	110777	3812225	Petaluma River	SON	T05N, R07W, Sec. 35, SE (M)	21	1	1 4	2 Amphibians	1	specific area	Presumed Extant	Natural/Native occurrence	Poor	N	20190424	20190424
Emys marmorata	western pond turtle	ARAAD02030	779	71249	72155	3812225	Petaluma River	SON	T05N, R07W, Sec. 35 (M)	12	1	1	Reptiles	1	non-specific area	Presumed Extant	Natural/Native occurrence	Good	N	20080118	20080118
Emys marmorata	western pond turtle	ARAAD02030	561	49246	49246	3812226	Petaluma	MRN	T04N, R07W, Sec. 19, NW (M)	210	1	1	Reptiles	1	specific area	Presumed Extant	Natural/Native occurrence	Good	N	20020325	20020325
Streptanthus anomalus	Mount Burdell jewelflower	PDBRA2G520	2	B4790	117703	3812226	Petaluma	MBN	T04N, R07W, Sec. 28, SE (M)	535	1	1	Dicots	1	80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20190628	20190628
Rana draytonii	California red-legged frog	AAABH01022	1563	A9426	111274	3812236	Cotati	SON	T05N, R08W, Sec. 24, SW (M)	51	1		Amphibians	1	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20170516	20170516
Tavidea tavus	American baday	AMA IED4010		49902	10/022	0010000	Cototi	90N	TOEN DOTW Day 29 Part 24				Mammak		90 meters	Percurrent Extrat	Natural/Native occur	Boor	N	20160914	20160911
Dana dan dan 7	Permencian Seloger	A4400104010	533	~33U2	104932	3012236	Colati	0.011	TOURS, PULLY, DWC. 26, NW (M)	24	1	<u> </u>	America	1	co meters	Presumed Extant	Network Network Occurrence	Court		4004045	40040467
Hana draytonii	California red-legged trog	AAABHU1022	959	69220	70000	3812225	Petaluma Hiver	SUN	104N, H0/W, Sec. 01 (M)	10	1		Amphibians	1	80 meters	Presumed Extant	Natural/Native occurrence	Good	N	19940429	19940429
Emys marmorata	western pond turtle	ARAAD02030	563	49437	49437	3812226	Petaluma	MRN	T04N, R08W, Sec. 13 (M)	150	1		Preptiles	1	80 meters	Presumed Extant	Natural/Native occurrence	Good	N	20020325	20020325
Rana draytonii	California red-legged frog	AAABH01022	559	48729	48729	3812226	Petaluma	MRN	T04N, R07W, Sec. 18, SE (M)	180	1		2 Amphibians	1	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20020617	20020617
Antrozous pallidus	pallid bat	AMACC10010	50	43657	43657	3812226	Petaluma	SON	T04N, R07W, Sec. 04, NE (M)	80	1	1	Mammals	1	80 meters	Presumed Extant	Natural/Native occurrence	Poor	N	19971011	19971011
Emys marmorata	western pond turtle	ARAAD02030	533	46138	46138	3812225	Petaluma River	SON	T05N, R06W, Sec. 33, NW (M)	200	1	3	Pepties	1	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20001027	20001027
Rana draytonii	California red-legged trog	AAABH01022	441	45553	45553	3812226	Petaluma	SON	T05N, R07W, Sec. 30 (M)	45	1		Amphibians	1	80 meters	Presumed Extant	Natural/Native occurrence	Good	N	20010524	20010524
Erioponum luteolum var. caninum	Tiburon buckwheat	PDPGN083S1	26	93241	94378	3812226	Petaluma	MBN	T04N, R07W, Sec. 28, SE (M)	550	1		Dicots	2	80 meters	Presumed Extent	Natural/Native occurrence	Excellent	N	20110603	20110603
Hesperolinon connestum	Marin western flav	PDLIN01062	0.4	932/1	110974	3812224	Petakima	MRN	TOAN BOTW Sec 28 SE AM	550			Dicots	-	80 meters	Presumed Extent	Natural/Native occurrence	Evcellent	N	20110602	20110602
An only offensive second	Name folge la fine	POCADODOLO	54	00007	000000	0010000	Detabutta	MON	TOHN, NOTH, OLC. 20, OC (III)	000			Dicota	-	00 maters	Descend Colorit	Natural Alation and an an	Constant		00440540	00140540
Disumption beautifut and the second states	North Coast composer	DMDOA 00072	5/	00007	07707	0012228	- evenuental Rotakum -	MDN	TOAN DOTAL C CANA	000	1	-	Managata	- 2	eo meter:	Descend Exteril	Not an /National Action	Excelent	N	20120-00	20110010
Filediopogon noovenanus	roror coast semapricre grass	- APGAAT0/0	34	youd/	9/530	3612226	· educina	rm dN	TOTH, NUTW, ONC. 21, NW (M)	+60	1	· · ·	wonocots	2	oo meters	- reautined extant	reason all reasons occurrence	CACHERIN		10120409	20120409
Taxidea taxus	American badger	AMAJF04010	405	70325	71214	3812236	Cotati	SON	T05N, R07W, Sec. 18 (M)	48	1	1 4	Mammals	1	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20061022	20061022
Rana draytonii	California red-legged trog	AAABH01022	840	61801	61837	3812226	Petaluma	SON	T04N, R07W, Sec. 04, NW (M)	85	1	1	2 Amphibians	1	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20050429	20050429
Emys marmorata	western pond turtle	ARAAD02030	662	69484	70264	3812236	Cotati	SON	T05N, R07W, Sec. 18 (M)	29	1	1 2	Peptiles	1	80 meters	Presumed Extant	Natural/Native occurrence	Good	N	20070525	20070525
Rana draytonii	California red-legged frog	AAABH01022	968	69801	70624	3812226	Petaluma	SON	T04N, R07W, Sec. 05, NE (M)	171	1	4	2 Amphibians	1	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20070819	20070819
Rana boylii	foothill yellow-legged frog	AAABH01050	476	73308	74273	3812225	Petaluma River	SON	T05N, R07W, Sec. 35, NE (M)	30	1	1	Amphibians	1	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20080703	20080703
Emys marmorata	western pond turtle	ARAAD02030	619	57929	57945	3812226	Petaluma	SON	T04N, R07W, Sec. 05, SW (M)	400	1	1	Peptiles	1	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	19980607	19980607
Rana dravtonii	California red-legged frog	AAABH010??	758	56889	56905	3812226	Petaluma	SON	T04N, R07W, Sec. 05, NW Mil	200	1		Amphibians	1	80 meters	Presumed Extent	Natural/Native occurrence	Good	N	20070607	20070607
Rana dravtonii	California red Januard from	AAABH01022	ρεο 1	51771	51774	3812236	Petakima	SON	TOAN BOTW Sec 05 SE AA	200			Amobibians		80 meters	Presumed Extent	Natural/Native occurrence	Evcellent	N	20030602	20030602
Advance and and and a	home and	4040040015	303	044.02	0.0000	0010220	Contral and	0.011	TO AN DOGAL ONE OD CT	200	-	- 1	Dista	-	00 materia	Descended Date	Natural Blating and	Ender Contraction		0005445	0005446
Athene cunicularia	burrowing owl	ABNSB10010	769	64140	64235	3812226	Petaluma	SUN	104N, R08W, Sec. 02 (M)	260	1		r Birds	1	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20051124	20051124
Emus marmorata	western nond turtle	LARAAD02030	527	45420	45420	3812225	Petakima River	I SON	T05N B06W Sec 31 (M)	160	1	1 3	Rentiles	1	specific area	Presumed Extent	Natural/Native occurrence	Good	N	20010506	20010506

OWNERMGT	FEDLIST	CALLIST	GRANK	SRANK	RPLANTRANK	CDFWSTATUS	OTHRSTATUS	LOCATION
	Endangered	Endangered	G5T1	S1	1B.1		SB BerrySB: SB CalBG/RSABG: SB USDA	
		-						
UNKNOWN	Inreatened	Inreatened	6263	8283		WL.	IUCN_VU	PETALUMA
UNKNOWN	None	Threatened	G5	S2			BLM_S; IUCN_LC	SONOMA CREEK NEAR THE TOWN OF SONOMA.
	None	None	6364	83		890	BLM & LICN VELISES S	
DPG-PETALUMA MARSH WA, PVT	Endargered	Endangered	0102	0102		rr-	IDUN_EN	PERADMA MARSH, ON WEST BANK OF PERADMA HIVEN FROM 2 MILES SOUTH OF PERADMA TO BLACK POINT, NW OF SAN PABLO BAL
DFG-PETALUMA MARSH WA, PVT	None	None	G2	S2.1				VICINITY OF NEILS ISLAND ON THE PETALUMA RIVER.
DEG-PETALUMA MARSH WA, PVT	None	None	G2	82			IUCN DD	PETALUMA RIVER MARSH, ABOUT 5.0 MI SOUTHEAST OF PETALUMA.
DEG RETALLING MARSH WALLINK	Endorsound	Endoppend	OFT1	01		ED	NARCI RM	ADEA OF BETALLINA MARSH MORTH OF MITD LEN SLOUGH
	Crical Quied	Linuargereu	0011				induction.	
DFG-PETALUMA MARSH WA, PVT	None	None	G5T3	S3		SSC	USFWS_BCC	PETALUMA MARSH, BORDERED ON THE EAST BY THE PETALUMA RIVER, SE OF PETALUMA.
UNKNOWN	None	None	G5T2	S2		SSC	USFWS_BCC	VICINITY OF PETALUMA.
LINKNOWN	None	Candidate Endangered	6263	81			LISES S	4 MILES SOLTHEAST OF PETALLIMA
UNKNOWN	None	None	G5	83		SSC	IUCN_LC	7 MILES NORTH OF NOVALO.
UNKNOWN	None	None	G3T2	S2	1B.2		BLM_S	WILLOW BROOK, NORTH OF PETALUMA.
UNKNOWN	None	Endangered	G3	S3		SSC	BLM_S; IUCN_NT; USFS_S	VINCINITY OF LICHAU CREEK, PENNGROVE.
LINUCIONAL	Maria	Constitute Fordersonad	0000				1050.0	
ORNAOWIN	NONE	Candidate Endangered	0203	01			uere_e	PERADUMA.
UNKNOWN	None	None	G2T1	S1	1B.2			PETALUMA
UNKNOWN	None	None	G4	S2		SSC	IUCN_LC	PETALUMA.
LINKNOWN	None	None	G5T2	82	1B 2			PETALLIMA
UNKNOWN	None	None	62	82	18.2		SB_CalBG/HSABG; USFS_S	PETALUMA
UNKNOWN	None	None	G3G4	S2		SSC	BLM_S; IUCN_LC; USFS_S; WBWG_H	PETALUMA.
UNKNOWN	None	None	G47TX	SX	1A			VICINITY OF PETALUMA.
LAUGICIAN	Federated	Endersonal			10.4		00.0-00.00000	
UNKNOWN	Endangered	Endangered	GI	01	1B.1		SB_CAIDG/HSADG	PETRLOWA.
UNKNOWN	None	None	G5T2	S2	1B.2		SB_UCBG	PETALUMA
UNKNOWN	None	None	G5T2	S2	1B.2			PETALUMA.
LINKNOWN	Noos	Pare	01	01	10.1		DIM C OD LICOA	BETALLINA SONDAVA COLINTY
Gildtonit	TRUTTE	1.00.00	G1	51	160.1		1011_0, 00_000M	
UNKNOWN	None	None	G2Q	82	3.1			BURDELL
DFG-PETALUMA MARSH WA	None	Threatened	G3G4T1	S1		FP	BLM_S; IUCN_NT; NABCI_RWL; USFWS_BCC	ALONG W BANK OF THE PETALUMA RIVER, IMEDIATELY N & NW OF HOG ISLAND, S OF LAKEVILLE, PETALUMA MARSH WILDLIFE AREA.
LINKNOWN	None	Threatened	65	83			BLM & LICN LC LISEWS BCC	SAN ANTONIO CREEK SOUTH OF PETALLIMA
UNKNOWN	None	Candidate Endangered	6263	81			USPS_S	IOLAY CHEEK.
DFG-PETALUMA MARSH WA	None	None	G4?T2	S2	1B.2		BLM_S	PETALUMA MARSH, BETWEEN WOLOKI AND MUD HEN SLOUGHS, ABOUT 5 MILES SOUTHEAST OF PETALUMA.
UNKNOWN	Threatened	None	G5T2T3Q	8283			AFS TH	ADDBE CREEK, ON THE EAST SIDE OF PETALLIMA.
CONCLUSION AND TRUCT UNIVERSITY	Federated	Endersonal	0074			rn	NADO DAS	TART ORE OF STALLING REPORTS AND AND AN ADDRESS OF ADDRESS AND ADDRESS ADDRESS AND ADDRESS
SUNDINA DAND THUST, UNKNOWN	Endargered	Endangered	0011	01		rr-	NADU_NAL	ENST SIDE OF PETALUMA RIVEN PROVIDENT 37 BRIDGE (CARLS MARSH) OFSTREAM ABOUT 55 MILES TO DAREVILLE, NE OF NAMATO.
DFG-PETALUMA MARSH WA	None	None	G5T2	S2		SSC	USFWS_BCC	PORTION OF PETALUMA MARSH LOCATED BETWEEN MUD SLOUGH AND DONAHUE SLOUGH.
UNKNOWN	None	Endangered	G3	S3		SSC	BLM_S; IUCN_NT; USFS_S	ADDBE CREEK, RUNNING BETWEEN SONOMA MOUNTAIN AND NW EDGE OF PETALUMA.
CITY OF PETALLIMA	None	Threatened	G3G4T1	81		FP	BLM & LICN NT NABCLEWI LISEWS BCC	MARSH SW OF SEWARE PONDS, AROUT 17 M FSE OF HAVSTACK & 2.2 M SE OF MWOK VALLEY FLEMENTARY SCHOOL, PETALLIMA
GITTOTTEINEOMA	110176	meanered	GUGHTT	51			dence, reentin, nebeljinic, een nojece	HEIGHT OF OLD MALE FORM, MOOT 13 IN LOL OF THE OPACK & LEW OL OF WHICK WELL FELLINE HEIGHT, ETHODING
CITY OF PETALUMA, PVT	None	None	G5T3	\$3		SSC	USFWS_BCC	MCNEAR, ALONG THE PETALUMA RIVER, ESE OF PETALUMA.
CITY OF PETALUMA, PVT	Endangered	Endangered	G1G2	S1S2		FP	IUCN_EN	PETALUMA RIVER MARSH, 0.5 MILE SE OF INTERCHANGE OF HIGHWAYS 101 & 116, PETALUMA.
LINKNOWN	None	Threatened	G3G4T1	81		FP	BLM & LICN NT NABCLEWI LISEWS BCC	PETALLIMA MARSH FAST OF NORTHWESTERN BAILBOAD, NORTH OF SCHULTZ SLOUGH & SOLITH OF PETALLIMA BIVER CLIT B
OTTY OF DETHILING	Federated	Endersonal	0074			rn	NADO DAS	ADDA OF OF UNK (A) AT UNK (A) A OF DETAILING DATE
CITT OF PETALOMA	Endangered	Endangered	0011	01		rr-	NABCI_NWC	ARDA SE OF HINT 101 AL HINT 116, N OF PETALOMA HINEN.
UNKNOWN	Endangered	None	G1	S1	1B.1		SB_CalBG/RSABG; SB_UCBG; SB_USDA	POINT REYES ROAD, 2 MILES SOUTH OF PETALUMA.
UNKNOWN	Endangered	Rare	G1	S1	1B.1		SB_UCBG	2 MILES WEST OF PETALUMA ON D STREET EXTENSION TOWARD POINT REYES.
DEG-PETALUMA MARSH WA	Endangered	Bare	G2T1	S1	1B.2			PETALUMA MARSH. BETWEEN SAN ANTONIO & MUD HEN SLOUGH. ABOUT 1.3 MI NORTH OF BURDELL ISLAND.
LINKNOWN	Noos	Noos	GET2	02	10.0		88 IICBO	A MILEO MALOC DETALLIMA
Gildoni	TRUTTE	TRUTTE	GUTE	-un	10.4		00_0000	The District of Local Action o
PVT-SPALLETTA DAIRY	None	None	G3G4	S3		SSC	BLM_S; IUCN_VU; USFS_S	SAN ANTONIO CREEK, WEST OF POINT REYES-PETALUMA ROAD, 2.5 MILES SSW OF PETALUMA.
PVT	None	None	G3G4	S3		SSC	BLM_S; IUCN_VU; USFS_S	ABOUT 1.0 MI NE OF SAN ANTONIO RD AT D ST EXTENSION & 1.2 MI SE OF CHILENO VALLEY RD AT ARMSTRONG (RD), SW OF PETALUMA.
CITY OF PETALLIMA, STATE	None	None	6364	83		880	BLM & LICN VILLISES S	FUS CREEK FROM LAKEVILLE HIGHWAY TO THE INTERTIDAL BOUINDARY ABOUT 3000 FT DOWNSTREAM FAST OF PETALLIMA
UNKNOWN	None	None	GNR	83		SSC	AFS_VU; IUCN_EN	PETALUMA HIVEH, BETWEEN NOHTHWESTERN PACHIC HAILHUAD AND LYNCH CHEEK CONFLUENCE, PETALUMA.
UNKNOWN	Threatened	None	G2G3	8283		SSC	IUCN_VU	MARIN CREEK, AT WESTERN AVENUE, SW OF PETALUMA.
UNKNOWN	None	None	G3G4	S3		SSC	BLM S: IUCN VU: USFS S	NW OF PETALUMA: 350 FT NORTH AND 0.25 MILE SOUTH OF MAGNOLIA AVE ALONG STREAM.
Ph/T	Noos	Noos	06	0.2		000	LICN LC	WEST OF BALLIA LANE AND SOLITU OF SUNGET OBAC WEST OF BETALLIMA
	TRUTTE	THUTTE				000	ioon(co	
CITY OF PETALUMA	None	Threatened	G3G4T1	S1		FP	BLM_S; IUCN_NT; NABCI_RWL; USFWS_BCC	ABOUT 0.3 MI SW OF CYPRESS DR AT PINE VIEW WAY, 0.7 MI SSE OF HWY 116 AT MCDOWELL RD, MCNEAR, ESE OF PETALUMA.
CITY OF PETALUMA	None	Threatened	G3G4T1	S1		FP	BLM_S; IUCN_NT; NABCI_RWL; USFWS_BCC	VICINITY OF PETALUMA RIVER & ADOBE CREEK CONFLUENCE, ABOUT 0.9 MI SE OF HWY 101 & HWY 116 INTERSECTION, E OF PETALUMA.
PVT	Threatened	None	6263	8283		890	LICN VII	ABOUT 1.0 MINE OF SAN ANTONIO RD AT D ST EXTENSION & 1.2 MISE OF CHILENO VALLEY RD AT ARMSTRONG (RD) SW OF PETALLIMA
SUNUMA CO WATER AGENCY	None	Endangered	63	83		SSC	BLM_S; IUCN_NI; USPS_S	ADDE CHEEK NEAH LAREVIEW HIGHWAY (HIGHWAY 116), PETALUMA.
CITY OF PETALUMA	None	None	G3G4	S3		SSC	BLM_S; IUCN_VU; USFS_S	SHOLLENBERGER PARK AT THE SOUTH END OF CADER LANE, PETALUMA.
PVT	None	None	G3G4	S3		SSC	BLM_S; IUCN_VU; USFS_S	0.5 MILE SOUTH OF SAN ANTONIO CREEK AND 0.5 MILE WEST OF POINT REYES-PETALUMA ROAD, 3 MILES SW OF PETALUMA.
9.0	Maria	Mana	~		10.1			CORDA DANGE OAN ANTONIO OFFICI MATERIALIS ON NORTH OFFICIAL DURING L
	1900 BERNE	reared	u1	31	144.1			Gardes reveals, der anticine of EER MALEBARED UN NUM IN SIDE OF MIL BUNDELL
UNKNOWN	Threatened	None	G2G3	\$2\$3		SSC	IUCN_VU	WIGGINS CREEK, ABOUT 0.2 MILES NE OF SKILLMAN RD AT LIBERTY RD, NW OF PETALUMA.
CALTRANS	None	None	G5	S3		SSC	IUCN_LC	HWY 101 ABOUT 0.2 M W OF COMMERCE ST AT TRANSPORT WAY & 0.3 MILES SSE OF N MCDOWELL BLVD AT PALO VERDE WAY IN PETALUMA
LINKNOWN	Threatened	Noos	0202	0000		000	LICN MI	ELLIS OBEEV, BETMEEN SOLITU ELV DOAD AND BETALLIMA MADOLLISE OF DETALLIMA
	TITERLE NG		GEGS	0200		000		
PVI	None	None	6364	83		880	BLM_S; IUCN_VU; USFS_S	0.15 MILE SOUTH OF SAN ANTONIO CREEK AND 1 MILE WEST OF POINT REVES-PETALUMA HUAD, 3 MILES SW OF PETALUMA.
PVT	Threatened	None	G2G3	S2S3		SSC	IUCN_VU	SAN ANTONIO CREEK, WEST OF POINT REYES-PETALUMA ROAD, 2.5 MILES SSW OF PETALUMA.
PVT	None	None	G5	S3		SSC	BLM S: IUCN LC: USFS S: WBWG H	HOUSE, NW CORNER OF GLENDON WAY AND MOUNTAIN VIEW AVE, PETALUMA.
p\rt.	Noos	Noos	0904	0.2		000	DIM CHICN MILLINES O	EAST OF DETAILING ADDONY O 19 MILES WEST OF INTERSECT OF ADORE DD & STAGE GUI OU DD, EAST SUORE OF DESERVICE
PVI	NONE	NONE	030+	03		000	BLM_5; IUCH_VU; USP5_5	ENSI OF PETALONIA, APPROX 0.16 MILES WEST OF INTERSECT OF ADDRE RD & STAGE GULLA RD, EAST SHORE OF RESERVOIR.
UNKNOWN	Threatened	None	G2G3	\$253		SSC	IUCN_VU	SOUTH OF MAGNOLIA AVENUE, WEST SIDE OF PETALUMA.
PVT	None	None	G5T2	S2	1B.2			APPROXIMATELY 1.5 AIR MILES NW OF THE NW CORNER OF MT. BURDELL OPEN SPACE PRESERVE.
Ph/T	Threatened	Threatened	01	01	10.1		SB CARG/DRADG SB LICEG	ADDROVINATELY 1.5 AID MILES MAY OF THE MAY CODNED OF MT DUDDELL OREN SPACE DESCENCE
20	hinne	News	0.00		40.0		00.00000000	CONTRACT ON A DESCRIPTION OF A DESCRIPTION OF AN ANTIMAX POLY AND A DESCRIPTION OF AN ANTIMAX POLY AND A DESCRIPTION OF A DES
PV1	rvone	reuné	0412	82	18.2		ob_uebu/HSABU	DUUTH OF SAN ANTONIO CHEEN, ABOUT 1.5 AIR MILES SE OF THE JUNCTION OF SAN ANTONIO HUAD AND POINT REVES PETALUMA ROAD.
PVT	None	Threatened	G2	82	1B.1		SB_BerrySB; SB_CalBG/RSABG	SOUTH OF SAN ANTONIO CREEK, ABOUT 3.4 AIR MILES NORTHWEST OF SUMMIT OF BURDELL MOUNTAIN.
PVT, CALTRANS	None	None	G5	\$3		SSC	IUCN_LC	HWY 101, 0.5 MINW OF INTERSECTION WITH OLD REDWOOD HWY.
P)/T	Threaton: *	Noos	0202	0000		600	ILCN MI	VELLY OBSERVISION OF THE DISTREET OBJORNAL SOLITH EDGE OF BETALLINA
	Deresserie	reard	0203	3203				INCLUSION CONTRACTOR AND A DIRECT OROGONA, OUT IT EDGE OF PETREDINA.
SUNUMA CO WATER AGENCY	NOR	None	G3G4	53		SSC	BLM_S; IUCN_VU; USFS_S	WILLOW BRUCK, JUST WEST OF HIGHWAY 101, 0.4 MILE NW OF THE OLD REDWOOD HIGHWAY EXIT, BETWEEN PETALUMA AND PENNGROVE.
PVT	Threatened	None	G2G3	S2S3		SSC	IUCN_VU	RESIDENTIAL AREA ALONG B STREET, PETALUMA.
CITY OF PETALUMA, PVT	None	Endangered	G3	\$3		SSC	BLM_S; IUCN_NT; USFS_S	ADOBE CREEK, EAST SIDE OF PETALUMA.
DUN GOUNTY	INDIE	nuné	6364	63		aati	BLM_0; IUGN_VU; USFS_S	FIGH FORD AL HELEN FOLINAM REGIONAL PARK, WEST OF PETALUMA.
PVT	Threatened	None	G2G3	\$253		SSC	IUCN_VU	3 POOLS WITHIN A TRIBUTARY TO MARIN CREEK, 0.3 MILE UPSTREAM FROM THE CONFLUENCE, WEST OF PETALUMA.
PVT-UNIVERSITY OF THE PACIFIC	Threatened	None	G2G3	\$253		SSC	IUCN_VU	0.2 MILE WEST OF POINT REVES-PETALUMA ROAD, JUST SOUTH OF PETALUMA.
p.r.	Noos	Noos	04	69		60C	BLM SHICK LC USENS BCC	ON ITS SIDE OF BUDNE VALUES BOAD, A 4 MUE OW OF THE INTERSECTION WITH SERING UP 1 DOAD, 3 MUTO OF ACTIVITY
		hines		00		000		A AND OF THE WITTERFERTION OF HIGHWAY AND REPORTED AND FRATTER REPORT OF PERIODAL

SPECIMEN LOCALITY STATED AS 'PETALUMA.' REFERENCES CLARIFY COLLECTION BY E. SAMUELS IN 1856 & THAT SAMUELS COLLECTED WIN 20 MI OF PETALUMA, THOUGH NEARLY ALL CATALOGED AS 'PETALUMA.'
INCOMENDATION AND A REAL OF A
ALSO A NARROW PORTION OF THE EAST BANK PETALUMA RIVER OPPOSITE THE MOUTH OF BLACK JOHN SLOUGH AND IN THE BAHIA-NOVATO.
189/ AND 189/ LOGATIONS STATED AS "PETALUMA CHEEK."
MAPPED TO PROVIDED MAP, SHAPEFILES FOR SITES ELCR, FASL, TUSL & WOSL, AND TRS.
1985: OBSERVED THROUGHOUT THE MARSH. 2004: DETECTIONS NEAR MIRA MONTE SLOUGH.
MIZ O CATIONS "DETAILINA" (000-5017) 14 EMIS DETAILINA" AND 10 Z MIS DETAILINA" (002) 10 Z MIS OF THE CHINESE CENTED OF DETAILINA" 10 25 MIS DETAILINA" (000) CASI OCATION: "DETAILINA"
MUZ LIDARIDAS, PERALMAR (1906, 1917), 1.5 MIS PERALMAR AND C.7 MIS PERALMAR (1927), C.1 MIS OF THE CHINESE CENTER OF PERALMAR, (1906, 1917), 1.5 MIS PERALMAR (1906, 1917), 1.5 MIS PERALMAR (1907), C.1 MIS OF THE CHINESE CENTER OF PERALMAR (1907), C.2 MIS PERALMAR (1907), C.2 MIS PERALMAR
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB 4 ROAD MILES SOUTHEAST OF PETALUMA, ALONG HIGHWAY 101, EAST OF DONAHUE SLOUGH.
EXACT LOCATION UNKNOWN, MAPPED AS BEST GUESS BY CNDOB. IN THE VICINITY OF WILLOW BROOK, APPROXIMATELY 1.0 MILE SW OF PENNIGROVE.
SHEET EDWERT, EDWERT EDWINK OD. EMBT EDWINK UNITER HET EDWINK EDWINK IN TEDWINK EDWINK EDWINK UNITER EDWINK UNITER HET EDWINK EDWINK IN TEDWINK EDWINK EDWIN
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN THE GENERAL VICINITY OF THE CITY OF PETALUMA.
MARPED NON-SPECIFICALLY TO PETALLIMA. EXACT LOCATION LINKNOWN, MOST LIKELY COLLECTED FROM FOOTHILLS TO THE SOLITH OR NORTH
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS IN THE VICINITY OF PETALUMA.
MAPPED GENERALLY TO SPECIMEN LOCALITY "PETALUMA." EXACT COLLECTION LOCATION UNKNOWN.
EXACT LOCATION UNKNOWN, MAPPED IN THE GENERAL WOINTLY OF PETALUMA.
EXACT LOCATION UNKNOWN, MAPPED AS BEST GUESS BY CNDDB IN THE VICINITY OF PETALUMA, BASED ON A 1930 CRUM COLLECTION.
EXACT LOCATION UNKNOWN, MAPPED IN THE GENERAL VICINITY OF PETALUMA.
VANT LICONTON LINKANDANI, MARDEN AS BEST GUESS BY ONIOR ADDI NO BETALLINA DASED ON SITE MARE GIVEN BY MODO AN
DON'T EXCENSION ORIGINAL WAY TO ADD STOLEY CALEGO DE CALUDO ANDUNE PERLUMA BACED UN OTE NAME CALEGO DE MUNICIPAL.
MAPPED TO GENERAL MAP LOCATIONS AND SHAPEFILES FOR 2009-2010 SURVEY SITES (6 TOTAL SITES W/ POSITIVE DETECTIONS). SOUTHERN HALF OF SITE REFERRED TO AS THE PETALUMA MARSH. DETECT
PART LOCATION UNKNOWN SPECIMEN COLLECTED BY E SAMUELS LABLED AS "PETALLIMA" HOWEVER OTHER REFERENCES (BRESZA000) DETAIL THAT THE NEXT WAS EDUAL YOAN ANTONIO ODER. NEAD O
LO IL DEMOLA PALLA A L'ENDANCIA PALLA A L'ENDANCIA DI LA CALLA DI LA CALA DI LA CALLA DI LA CALLA DI LA CALA DI LA CALLA DI LA CALLA DI LA
MAPPED NON-SPECIFICALLY ALONG THE EXTENT OF TOLAY CREEK. EXACT COLLECTION LOCATION UNKNOWN.
NEAR POND EDGE ON RAISED BED OF ORGANIC SOIL.
1994-1997 FISH ORSERVED FROM PETALLIMA RIVER TO 1600 FOOT FLEWITION 2016: ORSERVATIONS AT SITE PROPOSED FOR PARK, AROLIT 0.7 MILES NE OF THE JUNCTION OF SONOMA MOLINTAIN RD AND PA
MAPPED TO PROVIDED SHAPEFILE FOR SITES LAWA, PETE, AND PRW. NAHROW STRIP OF HABITATION EAST SIDE OF PETALUMA RIVER FHOM HWY 37 BHDGE TO ABOUT 65 MILES UPSTHEAM, JUST SOUTH OF
MAPPED TO 1997'S SURVEY REACH. ATTRIBUTED SPECIMEN COLLECTED FROM "3.5 MI ENE PETALUMA", EXACT LOCATION UNKNOWN.
I OCATION REPORTED AS TAN DW SEC 4 SE 4/4 HIST WEST OF SEMARE BANDS, MARDED TO SE 4/4 OF SEC 4 EVELIDING THE SEMARE BANDS, SHERVE CONTRUCTED AS BADT OF AN INVASIVE SEMARE BANDS.
EDGRIDM DESCRIBED AS 144 H7W SEC 1 SE 1/4, JUST WEST OF SEWAGE PUNDS. IMPPED TO SE 1/4 OF SEC 1, EACLIDING THE SEWAGE PUNDS. SURVETS CONDUCTED AS PART OF AN INVASIVE SPARTING F
10 TRAP GRIDS, 75 TO 100 TRAPS PER GRID AT 10 METER INTERVALS.
OTE DECEMPENT TO AS CAMA & SHEREY DON'TS IN 2007 (CAMA 1 & ADDANCED COUNTED CLOCKWIGE EDOM NW CODNED OF EATHER MADED TO ENTRE CAMA SHEREY OTE BASED ON DOWNED SHARES
and the server of the server o
MAPPED TO PROVIDED COORDINATES FOR PETALUMA RIVER - UPPER
ON ROAD BANK OUTSIDE FENCE. MAPPED BY CNDDB FROM 1.5-2.5 MILES SOUTH OF PETALUMA ALONG POINT REYES PETALUMA ROAD.
MARPED BY CNDDR ALONG THE DISTREET EXTENSION ABOUT 2 BOAD MILES SWIGE PETALLIMA
Inter ED DT ONDED REOND THE D'OTTELE EXTENSION REOD TE TOPD INCED ON OF TE PEDITIK.
A 1945 HOWELL COLLECTION FROM "SALT MARSH BORDERING SAN ANTONIO CRK NEAR SAN ANTONIO STATION, MRN CO" ALSO ATTRIBUTED HERE BUT MAY BE REFERRING TO EO #5 NEARBY. A 1945 LESCH
A 1945 HOWELL COLLECTION FROM "SALT MARSH BORDERING SAN ANTONIO CRK NEAR SAN ANTONIO STATION, MRN CO" ALSO ATTRIBUTED HERE BUT MAY BE REFERRING TO EO IS NEARBY, A 1945 LESCH EMACT LOCATION UNKNOWN, MARPED BY CINDIB AS A BEST GUESS FOUR POAD MLES NORTH OF PETALUMA ALONG OLD REDWOOD HIGHWAY.
A 194 HONEL COLLECTOR IROM "SALT MARIE BORCERING SAL ARTORIC O'REAR SAL ARTORIO STATION, MIRI CO'ALSO ATREJUTIO HERE BUT MAR EL REFERENCI DE DI MEAREY A 194 ESCH EXCL'I COLTON UNKOMM, MARIE BORCERING SAL ARTORIC O'RE ROM BUS FOR O'R FERLUMA A LONG CID REDVOCH HONKIV. DESTE DI ANAL-MEL ESTETOLI O'CERE AL ABOTTORI ERORIZ DE LA DARTINGET FON LONG MARIE MARIE MARIE MARIE DE DI MEAREY A 194 ESCH
A 1945-1045LL COLLECTOR FROM YOUT MARK DORDERING BAN ANTONIO ORI KARA MA MITINO STRIDU, MAN O'L ALD ATTRIBUTE HE'RE BIT MAR' IE REFORMUND TO DI A KARARY A 1946 LESON DAVEL COLOTION UNING MARKETO EL COLOSA A ESERTI CALESTI COLO ALMA LES ONIS INTO THE CHILLIANA ADVIO ALD DEVINO HOVINKI DAVEL COLOTION UNING MARKETO EL COLOSA A ESERTI CALESTI COLO ALMA DIA MA TINONO STRIDU, MAN O'L ALD ATTRIBUTE HE'RE BIT MAR' IE REFORMIN TO DI A KARARY A 1946 LESON DAVEL COLOTION UNING DI COLOSA ALESTI CALESTI COLO ALMA DIA MONTO DEVINO HA MANTINO STRIDU, MAN O'L ALD ATTRIBUTE HE'RE BIT MAR' IE REFORMIN TO DI A KARARY A 1946 LESON DESERVIDI NA HAL MAR E STRIETO O'COREL L'ALCOMMENT REPORTS THAT TURTES ALES USE A DUANY INVESTI CHINA DEVINO. DEVENNEN DAVEL DAVEL MARKANI DEVINO DI CONTRA
A 196 HONEL COLLECTOR FROM "SLT MARCH BORDERING DAN ANTONIO ORK NEAR DAN ANTONIO STATION, NINY CO' ALSO ATTREUTED HERE BUT MAY DE REFERRING TO EO AS NEARRY A 196 LESCH EXACT LOCATION UNIVON, MARVED BOY CURDE DA A EET GAES FOR ROAD MUES NORTH O' REPALUIA ALONG DA REMOCIO HOMAR. DESERRE DI A NULLY ELESTRICH O' CORE INCOMERT REPORTS THAT TURILES ALSO USE A DARY WISTE POID NEARRY. NEEY PANCH: MARVED TO PROVIED EFECTION LOCATION.
A 1945-IONEL COLLECTOR FROM YALT MARSI-DOREERING UWA MOTOVO OK KARA WA MOTOVO STRIDU, MAN O' MUD ATTRIBUTE VERE BUT MAY TE REFERRING TO EO A KARAR A 1946 LEGOR DART LOZOTOU MUNARMEND EN COREN A BERTI GREES FOR JOAD MLES MORTH OF REFULUMA AURIO DA REMORDA HOMMIK BERRING NA HAR-MEL STRETCH OF GREEK. LANCOMRER REFORTS THAT TURTLES ALSO UBE DARRY MARTE FOND REMORD BERRING NA HAR-MEL STRETCH OF GREEK. LANCOMRER REFORTS THAT TURTLES ALSO UBE DARRY MARTE FOND REMORD BERRING NA HAR-MEL STRETCH OF GREEK. LANCOMRER REFORTS THAT TURTLES ALSO UBE DARRY MARTE FOND REMORD BERRING NA HAR-MEL STRETCH OF GREEK. LANCOMRER REFORTS THAT TURTLES ALSO UBE DARRY MARTE FOND REMORD BERRING NA HAR-MEL STRETCH OF GREEK. LANCOMRER REFORTS THAT TURTLES ALSO UBE DARRY MARTE FOND REMORD BERRING NA HAR-MEL STRETCH OF GREEK. LANCOMRER REFORTS THAT TURTLES ALSO UBE DARRY MARTE FOND REMORD BERRING NA HAR-MEL STRETCH OF GREEK. LANCOMRER REFORTS THAT TURTLES ALSO UBE A DARRY MARTE FOND REMORD BERRING NA HAR-MEL STRETCH OF GREEK. LANCOMRER REFORTS THAT TURTLES ALSO UBE A DARRY MARTE FOND REMORD BERRING NA HAR-MEL STRETCH OF GREEK LANCOMRER REFORTS THAT TURTLES ALSO UBE A DARRY MARTE FOND REMORD BERRING NA HAR-MEL STRETCH OF GREEK NA HAR DARRY MARTE FOND REMORD BERRING NA HAR DARRY MARTE DARRY MARTE FOND REMORD FOND REMORD FOND REMORD FOND REMORD FOND REMORD FOND REMORD BERRING TURT MARTE DARRY MARTE FOND REMORD F
A 1945-IONEL COLECTOR FROM YOUT MARK DECERTING NOW AND
A 1945-004LL COLLECTOR FROM YOUT MARKSOPEREM DAW ANTONO OR KARA MA WATONO STROL AND O'A MAD ATTRAILTIGHER BIT LAW YE REFERRING TO DI A KARARY A 1946 LEDON BACT LODATOL MUNANDE DI YOLGAN A BESTI GERS FORD AND MASSI DONI OF MARKA MA WATONO STROL AND O'A MAD ATTRAILTIGHER BIT AND YE REFERRING TO DI A KARARY A 1946 LEDON BACT LODATOL MUNANDE DI YOLGAN A BESTI GERS FORD AND MASSI DONI OF MARKA MATINO STROL AND MASSI DONI OF MARKA VIETA MARKA MARKA TO PORTECI LEDON BACTORIS THAT TURILES ALSO USE A DARY WASTE PORD REARY BAST MARKA MARKA TO PORTECI DETENDING AND MARKA MARKA MARKA MARKA MARKA MARKA MARKA MARKA MARKA MARKA MAR
A 1945-1094EL COLECTOR FROM YALT MARFE DECERTING USA MATTOWO CRY KARA MAY MITANO STRUDO, MINO O' MLO ATTRIBUTE USE E UT MAY ER FEFTRING TO EO & NEARRY A 1946 LESON BACT LOCATION UNIXONIN MARFED RE CADER & A BEST GUESS FOUR FROM MULES NORTH OF PENJUMA AURIG OLD REDWICON HOMMIK BEST MANA MARFED RECTOR OF CREEK. MACOMER REPORTS THAT TURTLES ALGO USE A DARY WARTE FOIR DERREPT NEELY MANA. MARFED TO FROVERE DESETTION LOCATIONS. BUSINGENDES NA MARFED TO FROVERE DESETTION LOCATIONS. BUSINGEN DES MARKET AND MARFED RECTOR IN LOCATIONS. BUSINGEN DES MARKET DER MANA MARKET MAINT RECTOR DES MARFED RECTOR MARKET POIN DERREPT NEELY MANA. MARFED TO FROVERE DESETTION LOCATIONS. BUSINGENTES TOMA MARKET DE DESETTION LOCATIONS. BUSINGENTES TOMA MARKET DE DESETTION LOCATIONS. BUSINGENTION DAVIS UNDER MARKET MAINT THE MONTH TO BUS VOS DOWN FROM LAREXULE HWY CITY OF PERALMA MASTERIATER OXIDATION FORDS TO THE EAST, HAV FIELD & PERALMA RINK LI INTERTIDAL ZOLE. CUMURELIZED PORTION IN DOWNTOWN FERULANA. BUSINGENTION DAVIS UNDERREMENTATION DONOS DOWN STRUM LAREXULE HWY CITY OF PERALMA MASTERIATER OXIDATION FORDS TO THE EAST, HAV FIELD & PERALMA RINK LI INTERTIDAL ZOLE. CUMURELIZED PORTION IN DOWNTOWN FERULANA. BUSINGENTION DAVIS UNDERREMENTATION DONOS DOWN TOWN TROM LAREXULE HWY CITY OF PERALMA MASTERIATER OXIDATION FORDS TO THE EAST, HAV FIELD & PERALMA RINK LI INTERTIDAL ZOLE. CUMURELIZED PORTION IN DOWNTOWN FERULANA. BUSINGENTION DAVIS UNDERREMENTATION DO DOWNTOWN FERULANA.
A 1945-0004L COLLECTOR FROM YOUT MARK DORDERING MAN ANTONIO ORI KARA MAN ANTONO STRIDU, MAN O'A MAD ATTRIBUTE HERE BIT MAY TE REFERRING TO ED A BARREY A 1946 LEDON BACTLODATOL MUNICINA MARTER ET CASES OF A 1946 A SETTI CASES TO ED A MAN ANTONO STRIDU, MAN D'A DA DATTRIBUTE HERE BIT MAY TE REFERRING TO ED A BARREY A 1946 LEDON BASERDE DI HAN HAL MA E STRETCIO O CREEL ALCONRER PERDETE THAT TURTES ALSO LEE A DURY INASTE FOND REAVEY. BEEX MANCHI, MARTER TO PROVED DETECTION LOCATIONE. DE BURNETE TION NO SUB USTREME MAN TRAIN TA BACTINITO 1000 YOB DOIN FROM LAREVILLE HWY OTY OF PETALIAM WASTERWEEN DIDIONI PORES TO THE BART, HAR PETALIAMA PRAK LA INTERTIDUA. COMUNELIZO FONDEN IN CONTON TO 1000 YOB DOIN FROM LAREVILLE HWY OTY OF PETALIAMA WASTERWEEN DIDIONI PORES TO THE BART, HAR PETALIAMA PRAK LA INTERTIDUA. COMUNELIZO FONDENTION IN CONTON THE BURN. INTERTIDUA COMUNELIZO FONDENTION IN CONTON THE BURNET HAR PETALIZIONI Y 20. STRE CONSISTS OF ABOUT 19 ACRES OF GRADELADO ADOLT 11 ACRE OF WOODLAND (NOTH PCU/DDIN) 2009 BIGHTINO AT AURCTION OF BODELA ME AND PAULA LIN (CRELS,
A 1943 - IOREL COLLECTOR FROM YOLD WIRE RODERING UN AUTORIO ON KAR MA ANTONO STRIDU, WIN CO', MLO ATTRIBUTE OFFE EI TUW TE REFERRING A 1943 - ELECTORE ACCOUNT ON KAREN AN ANTONO STRIDU, WIN CO', MLO ATTRIBUTE OFFE EI TUW TE REFERRING A 1943 - ELECTORE ACCOUNT ON KAREN AN ANTONO STRIDU, WIN CO', MLO ATTRIBUTE OFFE EI TUW TE REFERRING A 1943 - ELECTORE ACCOUNT ON KAREN AN ANTONO STRIDU, WIN CO', MLO ATTRIBUTE OFFE EI TUW TE REFERRING A 1943 - ELECTORE ACCOUNT ON KAREN AN ANTONO STRIDU, WIN CO', MLO ATTRIBUTE OFFE EI TUW TE REFERRING A 1943 - ELECTORE ACCOUNT ON KAREN AN ANTONO STRIDU, WIN CO', MLO ATTRIBUTE OFFE EI TUW TE REFERRING A 1943 - ELECTORE ACCOUNT ON HOUSE AND AN ANTONO STRIDU AND AND ANTON STRIDU AND AND ANTON STRIDU AND AND ANTON STRIDU AND AND AND ANTON STRIDU AND AND AND AND ANTON STRIDU AND
A 1941-ROUGL COLLECTOR FROM YOUT MORE DOCEMEND AND AND YOUND OR YOR AND AN ANTINON DENDOL, MAN O'T MUD ATTRIBUTE USE BUT MAY BE REFERRING TO DO A KARRY A 1946 LEDON BOLT COLOTION UNINON INMERCIPE OF CORES A BEST GREES FOR DO A MULTINON DENDOL, MAN OT MUD ATTRIBUTE USE BUT MAY BE REFERRING TO DO A KARRY A 1946 LEDON BOLT COLOTION UNINON INMERCIPE OF CORES A BEST GREES FOR DO AND MUS SHOTH OF MULTINIA ADVID OLD DENDON DEAVINE. DESEMBLED IN A MULTINE STREETCH OF OPERAL LANCOWERS REFORMS THAT TURTLES ALSO LISE A DURY INVESTE FOND REAREY BEST MANDAL MARES DIR FORMATION DE CONTROL IN CONTON PERAL LANCOWERS REFORMED AND REAR AND REAREY INTERTIDUA ZONE, CHANNELIZED PORTION IN CONTON IN THE MULTINIA DIR OLD DERIVER AND MULTINIA DIR OLD DERIVERA AND MULTINIA DIR OLD DIR
A 1943-004L COLLECTOR FROM YOU MARKS DOPERING UN AUTORIO ON KARA MA MOTION STROLD, MINO O' ALCA ATTRIBUTE LIFE E UT UNE REFERRING TO ED & KARARY A 1948 LESON EXECUCIDATION UNIVERSI ON COLORIS A A LESTI CIESTE COLOR LOBALISAS DIVINT OF PUBLINA AUTO AD CONTRADIT. DE LES DE LESON EXECUCIDATION UNIVERSI DI PORCISO ESTECTIONI O CONTRA A LESTI CIESTE COLOR LOBALISAS DIVINT OF PUBLINA AUTO AD CONTRADIT. DE LES DE LESON EXECUCIDATION UNIVERSI DI PORCISO ESTECTIONI DI COLORIS. 2003 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2003 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2003 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2003 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2003 EUROPERIO DI PORCISO ESTECTIONICOLOCORIS. 2003 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2003 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2004 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2005 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2005 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2005 EUROPERIO PORCISO ESTECTIONICOLOCORIS. 2005 EUROPERIO PORCISO ESTECTIONICOLOCORIS PERLIDAN. 2006 EUROPERIO PORCISO ESTECTIONICOLOCORIS DE LES DE LES DE LA LES DE LES DE LES DE LOCACIÓN DE SOCIAL POR ON ALLA LO PORCISO. 2007 EUROPERIO PORCISO ESTECTIONICOLOCORIS PERLIDAN. 2008 EUROPERIO PORCISO ESTECTIONICO DE SOCIAL POR OLIVIO DE VIDENCIDO DO PORCISO ESTE DI PORCISO ESTE
A 1943 HOREL COLLECTOR FROM YALT MARK ROPERING WAI ANTONIO ORI NAJA NA MATONIO ORI NAJA NA MATONIO O' MAJA ATTRIBUTIO LERE E UT MAY E REFERRING TO DI A BARREA A 1946 LEDAN BACTLODATOL MUNANDE DI O'COBINA ALESTI CARES FORME ANTONIO DENDO, MANO O' MAJA ATTRIBUTIO LERE E UT MAY E REFERRING TO DI A BARREA A 1946 LEDAN BACTLODATOL MUNANDE DI O'COBINI AL REFORME TO TATUNI AL MANUAL BANTA DI ANDA MATONIO DENDO, MANO MARINA DI ANNA MAYA DI O'COBINI AL MACOMINI REPORTS THAT TATULTE ALA JUEI A DAINY WAITE FORD RAMEY. NULL MANCA MARYEN PONODED ESTI TO MONOLATORI. 2003 EUROPERIA FRONCESSI COMO DI ANTONIO DE TATULA DI ANDA DI ANDA MATONIO DE MANA DI ANDA DI A
A 1945-0000, MAYED & TORGEN AND AN ANYONG OR KARA MAN ANYONG OR KARA MAN ANYONG STRIDU, MAN O'C ALGO ATTRIBUTE HERE BIT MAY BE REFERRING TO DO A BAAREN A 1946 LEGON BOAT CONCIDENTION MANDER D'A COBRE A ABERT GASSES TORGEN AND AND ANYONG OR KARA MAN ANYONG STRIDU, MAN O'C ALGO ATTRIBUTE HERE BIT MAY BE REFERRING TO DO A BAAREN A 1946 LEGON BOAT CONCIDENTION MANDER D'A COBRE AL MACONINE REPORTS THAT TURTLES ALGO USE A DURY INSETE FORD REAREN BIT MAN ANY ANYONG TORGEN DESTINUE AND AND ANY
A 1943-IORUL COLLICION FROM VIEW MARKSOPERING UNA MATCHING ON KARA MA MATCHING STRIDU, MAN O'L ALD ATTRIBUTE UNE REFERENCE ON LAW MARKSOPERING UNA ALTRIBUTE LA MARKSOPERING UNA ALT
A 1945-1004L COLLECTOR FROM YIEL MARK DORCETING MAN ANTONIO CIN KAR MA WATCHING STRIDG, MINO CY ALSO ATTERET.TO LEFE BIT MAY TE REFERENCI TO LA SALATERE AL 1946 LESCH BACT LOCATION UNIVERNI MARKETE DI FORMA A BESTI CIESTE TO LA SALATE MARKET DE LA MARKET MAN ALSO ALSO ATTERET. TO LEFE BIT MAY TE REFERENCI TO LA SALATERE AL 1946 LESCH BASTRADIA IN MUN MA E STRETCH OF CREEK LACCOMEN REPORTS THAT TURTES ALSO LEE A DURY WASTE MARK REVER BEST MARCH. MARKET DI PROVEDO ECETCION LOCATIONE. BEST MARCH. MARKET DI PROVEDO ECETCION LOCATIONE. DI BURATEST FILMO VISI JURTEMAR MARKET DI PROVEDO STOTA DI AL 1940 LESCHE MIN CITO OF PERLIAMA WASTERMEEN ROMONION PROMIS TO THE GALT, MIN FILLO AL PEDULAMA PRAK LA INTERTIDA. ZONE CHARLEZZO PORTION IN DOMITORI NELLANA. DI BURATEST FILMO VISI JURTEMAR MARKITA AL BERETISTA DI E SALATERI ET AL LOCALITY 28. SITE CONSISTI OF ADOLT IN ACRES OF GRADELAND AND ABOUT 1 ACRE OF WOODLAND (NOTH POLYDON). 2005 BISHITTORI AT AUCTION OF BOOLEAN PRAK LA PRAVENI DI PROVINCE LOCATION ELECTORI DI ALTERIZI DA BERGINE DI E SALATERI ET AL LOCALITY 28. SITE CONSISTI OF ADOLT IN ACRES OF GRADELAND AND ABOUT 1 ACRE OF WOODLAND (NOTH POLYDON). 2005 BISHITTORI AT AUCTION OF BOOLEAN PRAK LA FER VILLO AL INFORMATIONI NO ANALY A PERVILANA WANARE BISHITTA AT AUCTION OF BOOLEAN PRAK LA FER VILLO AL INFORMATIONI DI ALTERIZI DI ALTERIZ
A 1943-IORUL COLLECTOR FROM VIEW MARK DOREERING UW ANTONIO O'R KAR MA ANTONIO STROL, MAN O'R MO O' MLO ATTRIBUTE HET BET UM VIE REFEREND TO TO A KARARY A 1948 LEDOR EXECUTODATION LINKING DE VICENS A MEETI GERS FORM AND MARK SING THE PROVIDE DE ADMINI MARK DE LEDOR EXECUTODATION LINKING DE VICENS A MEETI GERS FORM AND MARK SING THE PROVIDE DE ADMINI MARK TERMER ORDATION FORMET DE PROVIDE TO PROVIDE DETERMINI MARK THE MOUTH TO 100 YOS DONI FROM LINKING LE MARK MARTENIERE ORDATION FORMET TO THE EAST HAV THE REFEREND AND THE MOUTH TO 100 YOS DONI FROM LINKING LINKING LINKING LINKING MARK LINKING
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A 1943-0000, MARPES DE YORKS A LEST GASESTICATION MESS UNIT OF MARIA MA ANTINON OF MUCH THRUTH (HE TEL THAT HE TELEFORMS TO DO A MARPER A 1948 LESCH CALCILLOCATION MARPES DE YORKS A LEST GASESTICATION MARPES AND MESS DOILS TO PERLIMA AND AD CARDEND HARMAN CONTRACT THRUTH AND ALL ENTERTION OF OREX, LACOXIMEN PROVIDE THAT THATES A LEST OLE A DARY WARTE PROVIDE ADMARY MESS THRUTH AND ALL ENTERTION OF OREX, LACOXIMEN PROVIDE THAT THATES A LEST OLE A DARY WARTE PROVIDE ADMARY MESS THRUTH AND ALL ENTERTION OF OREX, LACOXIMEN PROVIDE THAT THATES A LEST OLE A DARY WARTE PROVIDE ADMARY MESS THRUTH AND ALL ENTERTION PROVIDE DESTINATION OF MUCH AND ALL MARLE HWY OT OF PERLIMA WARTEWER ORDATION PORCES TO THE EAST, HWY FIELD & FESTULAMA FREE LA MESS THRUTH AND ALL MARPES AND ALL MARKET AND ALL MARKET HWY OT OF PERLIMA WARTEWER ORDATION FORKES TO THE EAST, HWY FIELD & FESTULAMA FREE LA MERSTED TO PROVIDE CONTON ON THE TULAN. IN WARLE SITE PROVINCES COND CORTER BUT IT IS UNKERSY AS A BREETING SITE SHAFTER IT AL LOCALITY 38. STEL CONTENTS OF ADDRESS OF OWNER OWNER TO CONTON ON THE PROVIDE CONTENTIATION SITE DESIDENCE ADDRESS MARCHANT DE ADDRESS OF ANALY AND ALL VIER PROVINCES CONDENDERSING COUNTY FREUDA. IN WORKS OF OPROVED ENTERTION ON THE COUNT. IN WORKS OF OPROVED ENTERTION ON THE OUNCLUSS OF ADDRESS
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THE RECENT KNOWN DISTRIBUTION OF THE ENDANGERED SONOMA DPS FROM SANTA ROSA PLAIN IS WITHIN 20 MILES OF PETALUMA. THOUGH UNCERTAIN, IT IS POSSIBLE THAT SAMUELS COLLECTED THES HARTO CONSISTS OF A SLOW MOVING STREAM, VIGENTED BY OFTINES AND IMPROVED BY MORTING IF & JANOZIE, BANKS OF MOSTIV EXPOSED DOL, WITH KANY ACCESS TO WRITE SUPPOLYCENDO, OR ONE OF THE LANDERST CONTINUOUS BUT MARKETS IN THE MANY INFORMACIO BAN AREA CONSILI. MARKETS CONSILIES AND ALL MARKETS CONSILIES AND MORTING AND ALL MARKETS CONSILIES AND ALL MARKETS AND ALL MARKETS CONSILIES AND ALL MARKETS CONSILIES AND ALL MARKETS CONSILIES AND ALL MARKETS CONSILIES AND ALL MARKETS AND ALL MARKETS CONSILIES AND ALL MARKET

OCCASIONAL IN LOW, ALKALINE FIELDS.

IN SALT M

IN BUT MARKY. COSTAR, BUT MARKY. VCERTATION INCLICES SALICORNA VRIGINCA, GRINDELIA STRICTA, SCIPPUS SPP, & SPARTINA FOLDEA, SUPROLIZINA LAND INCLUCES AGRICULTURAL LAND & LANDFLL. STE QUA THIS INSTORE COCCURRENCE IS OUTSIDE INHAT IS GENERALLY CONSIDERED TO BE THE PRESENT BREEDING RAVICE OF THE SPECES IN CALFORNIA. "THE NEST MIS ON A LARGE WHITE GAR, OVER A DEEP THIS INSTORE COCCURRENCE IS OUTSIDE INHAT IS GENERALLY CONSIDERED TO BE THE PRESENT BREEDING RAVICE OF THE SPECES IN CALFORNIA. "THE NEST MIS ON A LARGE WHITE GAR, OVER A DEEP

NATEL SLT MARSH ABSOLNTED WITH SULCOREA VERDICAL BETCHLE SPICER, FRANKSIN SULFA, POLYPORDA SPE, LIKONEU, OLLFORNCLM, ND CUSCUTE SULFA. BEER FLANDE DF OK, MARTINE & BUT (REST TO UPPER REACHES 1650). TOWERTONNET TO MULCA (MAL ALBERLOWER TO MORE FO TO FEFLUAM RAY, OS DERIX ONCE DIRECTED TO SULFAL. BUT (STATUS). SULT MARSH ADMINISTORY SULFACEMENT, SULFACE TO USE OF TO THE SULFACE AND SULFACE TO THE SULFACE A CREEK FLANKED BY C COASTAL SALT MARSH

I INDE NEW WARDT NEWIN RAUMENT I UTWERE TURGE LUMPER MALE ALSO DETECTED LANO CUTIEGO OF SEMALE PONDE IS PROTECTED BY CITY OF PELLUMA. I COSTAIL BRACKER MERINA HUBITE. MOST IPROCULTIVE AREAS TRAPPED WERE ETTREEN POLICIVED AND UFUND ANNUAL GRASLIAID. THE NOTHERN MARH WAS CONSIDERED THE BEST HABITE.

MARSH. DOMINATE VEGETATION INCLUDE SCIRPUS SP. AND PICKLEWEED.

IN MOIST SOIL ON HILLSIDE UNDER OAK DISTICHLIS AND SALICORNIA PRESENT. KS AND LAURELS.

NETRIC CONSISTS OF A NAMPONI COMPLOY OF ALEER REMAIN HARTIN, SUPPONINCED BY RUCEMA, GRADIANA NO PASTUPE. SERIES OF TOYONG PROVINDIA CAURICI, MERITIA YIM LUKANA DONA HING GANGSLANG BASTURAL FOR MESTING, SUPPONINDIA LAND LISED FOR GRADING, RIMAL RESIGNIFIL, VISILE DISTURBANCE FR SUPPONINDIA DI ALGON COMPENSIONE TREMINA VINI A BARDISSILTI GONANDALE, DISTOLI POR JO POR JONNO, RUMAL RESIGNIFIL, VISILE DISTURBANCE FR SUPPONINDIA LAND LISE SUPPONI SUPPONINDIA LAND LISE SUPPONIN SUPPONINDIA LAND LISE SUP

NATIE CONSISTI OF A TIRLITARY WITH ANARONA. HARITO DUI TO OTTE GIVAXIO. MINITE CONSISTI OF A DUI AUTO MONIALIANE AND DUI TO OTTE GIVAXIO. MINITE CONSISTI OF ICO AVANTE GIVARIANE AND POLLIA DI LLO GIVASLANDO AVIOLANDE SUPROLINDO LAND USE RELICE FINATA AND RESERVAD. MINITE CONSISTI OF ICO AVANTE GIVARIANE AND POLLIA DI LLO GIVASLANDO AVIOLANDE SUPROLINDO LAND USE RELICE FINATA AND RESERVAD. SALT MARSH DOMINATED BY SPARTINA FOLIOSA AND TULES.). DATORS, PONDS HAD 1-5% EMERGENT AND 10-20% AQUATIC VEGETATION, LAND USE: GRAZING & RURAL RESIDENTIAL, PONDS HAVE HIGH POPUL

ES OF 7 PONDS USED FOR BREEDING & ESCAPING PRE DENSE OF THE SECOND PROCESSION OF THE WORK THESE AND THE SECOND AN

SEPENTINE CUICINOP IN SEPENTINE GIASSIAND. BANL SPRANNL GREX INTE GEBE AID RICHT WILLOW REWARK SUPROJACING LAD LED FOR GRAZING, CREX HISTORCALLY OWNRELDD. RICKGREE GROEFER AF ARACLITURE AU GRAAI LAD LIEL THE CONTRY REMAIN OF HAY YN IS A WILLDEE BARRER. IWAITE CONSISTS OF A BANL STRAML RUWNN O'R O'RULUM AMARK, WITH SOME SALTWIETR RITHUSON. WESTERN FOND TURTE ALSO FOUND AT THIS STE. WIERTE CONSISTS OF A ARACLITURE, AR ARCHITURE, RESOR

NAMENT CONSISTS OF AN AGRICULTURAL RESINCE. MEMORY CONSISTS OF AN AGRICULTURAL RESINCE. NOT AND AGRICULTURAL RESINCE AND DIAMAGES ALONG DIA ANTONIO CREEK, CREEK S YEETING DI Y ALMONIO CORRIGON OF ALCER RINAUM INSERT, SUMPLICED DI Y RUELING NOT AND YEETING AND AND YEETING A

HABITAT CONSISTS OF A SLUGGISH, LOW-GRADIENT STREAM, WITH LIMITED RIPARIAN VEGETATION WITHIN A MAN ED FLOOD CHANNEL

HARTAT CONSISTS OF SAUGUES LOW GRUEDET STERAM, WITH LIMITED REVEAUA VEGETATED WITHIN A LANAGED FOOD CHAINEL. HARTAT CONSISTS OF DEVELOPED RESIDENTIAL PROPERTY SURROLADED BY CATTLE RENCES, VEGETATED BY NATS- AND KON-LIVE GRASSLAND, AND REVRAM AREAS, VEGETATED BY CANTS HARTAT CONSISTS OF A PERSINLE, FOOL WITHIN A CREEK, CEPTH WIS FROM 1: SPEET COURING JULY 2001, MARKIN REVEAU REVEAU REVEAU REVEAU HARTAT CONSISTS OF A PERSINLE, FOOL WITHIN A CREEK, CEPTH WIS FROM 1: SPEET COURING JULY 2001, MARKIN REVEAU R

GENERAL	THREAT
	MUCH DEVELOPMENT IN THE PETALUMA AREA SINCE 1880; SITE LIKELY EXTIRPATED.
2 COLLECTED JUSINI 4/081 & 270516LBV F. SAMUELS WIN 20 MUES OF PETALLIMA RETWEEN DEC 1855 ULL 1856. THIS IS THE 2ND COLLECTION RANGE-WIDE & 1ST FROM THE SONOMA DPS. NONE FOUND	
2 COLUMN FROM FROM TO AND AND AND A THE SHORE OF THE SHORE AND THE SHORE	
Eds bei Collected un 23 milliona.	
MANY HISTORIC TRAPPING RECORDS FROM THIS VICINITY. SITE PARTIALLY PRIVATELY OWNED. 2005, 2-5 SMHM OBSERVED IN NEST ABOUT 0.50 MI N OF HWY 37 BRIDGE.	MAIN DISTURBANCES/THREATS ARE FROM HUMANS, DOGS, AND CATS. SOME ORV ACTIVITY, ADJACENT SUBDIVISIONS.
SEE <u>WWWDFG.CA.GOV/BIOGEODATA/VEGCAMPINATURAL_COMM_BACKGROUND_ASP</u> TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.	
SBMNH SPECIMEN #101743 COLLECTED IN 1897. ANSP SPECIMEN #73997 (OTY 10), COLLECTED BY J.B. DAVY ON 31 JAN 1899. FOUND PRESENT IN 1984 BY KELLOGG.	
7 DETECTED ON 1 MAY 1973. 3 TO 4 ADULTS HEARD ON EACH OF 4 SURVEYS CONDUCTED MAR & APR 2006 IN TIADAL SALT MARSH JUST W OF SEWAGE PONDS. 2-5 DETECTED ON 17 MAR & 13 APR 2009. AT LI	
40 BREEDING PAIRS LOCATED DURING & 1985 SURVEY & TOTAL OF 9 DETECTIONS AT 8 LOCATIONS ON 12 APR AND 21 MAY 2004 COMBINED. SITE PARTIALLY PRIVATELY OWNED	THREAT ATTRACTION OF PREDATORS/SCAVENGERS DUE TO LANDEU
CONTECTED (CAS) 4901 19 CONTECTED ANZ BEAT 5001 7007 7098 1908 1 CONTECTED ANZ 80193 1017 (CONTECTED (CAS) 4019 3(CONTECTED ANZ 85190 5101 5101 5101 5101 5101 5101 5101	
1 COLLECTED (CHG), 1011. 18 COLLECTED (WVZ #0147-5062, 7087, 7086), 1906. 1 COLLECTED (WVZ #0163), 1917. 4 COLLECTED (CHG), 1916. 24 COLLECTED (WVZ #01639-51619, 31621, 31622), 1927. 11 COLLECTED (WVZ #0163), 1917. 4 COLLECTED (WVZ #01639), 1917. 4 COLLE	
COLLECTED 1 OCI 1960.	
MALE (MVZ #113572) COLLECTED BY ALDEN H. MILLER ON 20 JUL 1949.	
ONLY INFORMATION FOR THIS SITE IS REFERENCE TO THIS COLLECTION IN 1996 FLORA OF SONOMA COUNTY. UNKNOWN NUMBER OF PLANTS SEEN IN 1987. NEEDS FIELDWORK.	
5 COLLECTED ON 3 SEP 1987.	
COLLECTIONS FROM 6 AUG 1960 AND 21 OCT 1965.	
OCCURRENCE BASED ON A SINGLE COLLECTION BY J. CONGDON IN 1880-1992 CORRESPONDENCE BY B. GLIGGOLZ INDICATES THAT SITE IS EXTREMETED	
ONLY SOURCE OF INFORMATION FOR THIS STIE IS 1880 COLLECTION BY CONSIDEN.	
ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS AN 1880 CONGDON COLLECTION. NEEDS FIELDWORK.	
5 MALES COLLECTED ON 9 OCT 1938 BY J. VON BLOEKER (LACM #5069-5073).	
BASED ON ONE COLL. BY CONGDON (SN; UC, G) NEAR HIS HOME IN PETALUMA. IN 1932 JOHNSTON SPECULATED THAT IT WAS EXTIRPATED BY "EXTENSIVE CULTIVATION OF LAND". SPECIMEN SHOULD BE EXA	
SITE IS BASED ON AN ANONYMOUS COLLECTION FROM AN UNKNOWN DATE, CITED IN A 1989 REVEAL ARTICLE. AT 1996 RECOVERY WORKSHOP, PARTICIPANTS AGREED THAT IT'S UNLIKELY PLANTS STILL OCC	
ON Y SOURCE OF INFORMATION FOR THIS SITE IS A 1920 CRUM COLLECTION NEEDS FIELDWORK	
SITE BASED OR AN 1880 CONSIDER TON, NEEDS HELDWORK.	
OCCURRENCE IS BASED ON SITE NAME GIVEN IN A 2017 MORGAN REPORT, UNKNOWN WHEN PLANTS SEEN. THIS IS AN UNDESCRIBED VAR. OF T. POLYODON, CALLED "WAR. OLIGODON" BY R. MORGAN REPORT, UNKNOWN WHEN PLANTS SEEN. THIS IS AN UNDESCRIBED VAR. OF T. POLYODON, CALLED "WAR. OLIGODON" BY R. MORGAN REPORT, UNKNOWN WHEN PLANTS SEEN. THIS IS AN UNDESCRIBED VAR. OF T. POLYODON, CALLED "WAR. OLIGODON" BY R. MORGAN REPORT, UNKNOWN WHEN PLANTS SEEN. THIS IS AN UNDESCRIBED VAR. OF T. POLYODON, CALLED "WAR. OLIGODON" BY R. MORGAN. REPORT, UNKNOWN WHEN PLANTS SEEN. THIS IS AN UNDESCRIBED VAR. OF T. POLYODON, CALLED "WAR. OLIGODON" BY R. MORGAN. REPORT, UNKNOWN WHEN PLANTS SEEN. THIS IS AN UNDESCRIBED VAR. OF T. POLYODON, CALLED "WAR. OLIGODON" BY R. MORGAN. REPORT, UNKNOWN WHEN PLANTS SEEN. THIS IS AN UNDESCRIBED VAR. OF T. POLYODON, CALLED "WAR. OLIGODON" BY R. MORGAN. REPORT, UNKNOWN WHEN PLANTS SEEN. THIS IS AN UNDESCRIBED VAR. OF T. POLYODON, CALLED "WAR. OLIGODON" BY R. MORGAN. REPORT, UNKNOWN WHEN PLANTS SEEN. THIS IS AN UNDESCRIBED VAR. OF T. POLYODON, CALLED "WAR. OLIGODON" BY R. MORGAN. NEED	
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1945 HOWELL COLLECTION. NEEDS FIELDWORK.	
DETECTED IN 1977 & 1985. HIGH ABUNDANCE (>2.12 RAILS/HA) IN 1986, 1988 & 2001-02. 10 DETECTED IN APR-MAY 2004. 2 DETECTIONS ON 13 APR & 12 DETECTIONS ON 17 MAR 2009. DETECTIONS OF 3, 7, & 12	PREDATORS ATTRACTED BY THE LANDFILL
EGQ(S) COLLECTED BY E. SAMUELS DURING HIS COLLECTING PERIOD FROM DEC 1855 TO JUL 1856.	
COLLECTED ON 31 AUR 1953	
427 DE MARTE ANDERSON IN 1005 CALLING SEEN THIS SEENES AT ATLLED NEADON I CONTAND IN DEDIARI IS VEADO, NAT EALING X TURGE I CONTAND IN 2005 PUBLIC 2005 CALLING SEENES AND A SUBJECT 2005 CALING SEENES AND A SUBJ	SITE IN ADEA OF DRAINAGE STRUCTURED, BUT TUREATS UNKNOWN
10/3 FUNRTS UBSERVED IN 1993. CULLINS INS SEEK THIS SPECIES ALL UTHEN NEARBY LUCKTUNS IN PREVIOUS TEARS, NOT FOUND ALL THOSE LOCATIONS IN 1993 BY HUST L. 1990 CULLECTION BY BALLING	alle in Area Or Drainase al hubitories, builtimeats unknown.
OBSERVATIONS MADE ALONG THE STREAM REACH FROM 1984 TO 1997. 3 ADULTS AND 10 JUVENILES OBSERVED ON 8 APR 2016.	POACHING, LITTER, HABITAT DESTRUCTION, LANDSLIDES, WATER DIVERSIONS, FERTILIZER RUNOFF (1997). DEVELOPMENT (1997, 2016).
1-2 DETECTED 15 JUN 1983. 3-4 DETECTED 28 JAN-15 JUN 2004. 2 DETECTED ON 24 MAR 2008. 1-13 DETECTED 20 FEB & 4 APR 2009. 3-9 DETECTED 3-19 FEB 2010. 7-16 DETECTED ON 9 FEB-5 MAY 2011.	THE MARSH IS VERY NARROW, AND POSSIBLY THREATENED BY DEVELOPMENT PRESSURES.
14 COLLECTED IN 1918 & 1 COLLECTED IN 1921 & 1922 (CAS). PLOTS SURVEYED BIWEEKLY APR-JUN AND AUG -OCT, 1981. MEAN NESTING PAIR DENSITY (N/HA) FOR 7 MAR 1981: NATURAL CHANNEL, 24.54/-4; 3	
COLLECTED FROM VICINITY IN 1940. 1 ADULT FROS OBSERVED ON 14 APR 1997, BY 10 JUN 1997 "LOTS" OF FROSS WERE FOUND. 1 FROS OBSERVED IN 1998.	THREATS INCLUDE RUN-OFF FROM ADOBE CREEK GOLF COURSE AND CULVERT CLEARING.
1-2 ADULTS HEARD ON 3 OF 4 SURVEYS CONDUCTED IN MARCH & APRIL 2006. 4-5 DETECTED ON 4 MAR 2011; EXACT LOCATION UNK, BUT WITHIN LARGER MASH, AT LEAST 1 DETECTED AURALLY ON 21 FEB A	
ONE DESERVICE BARE LOCATED IN IDING A 1995 STREEY	
UNE BREEJING PRIN LOUALED DUNING A 1980 SURVET.	
NUMEROUS SPECIMENS COLLECTED AT MONEAH BRIDGE AREA BETWEEN 1927 AND 1940, 19 TRAPPED IN 915 TRAPPIED IN 915 TR	
2 DETECTED FROM GAMA1, 3 FROM GAMA2, 4 FROM GAMA3, 2 FROM GAMA4, 1 FROM GAMA5 & 1 FROM GAMA6 ON 6 MAY 2007. 2 ESTIMATED FROM DETECTIONS ON 12 APR 2008. 1 DETECTED DURING POINT	
DETECTED ON 16 FEB AND 8 APR 2010. 1 DETECTED ON 2 APR 2012. 2 RESPONDED TO BROADCAST 24 MAR 2014.	
CONSIDERED "LOCALLY PLENTIFUL ON ROADBANK" IN 1969; EXTERMINATED IN ADJACENT PASTURE. 1921 TRACY COLLECTION FROM "NEAR PETALUMA ON LOW, RICH FIELDS" ATTRIBUTED TO THIS SITE.	
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1982 GOOD COLLECTION, QUESTIONABLE IDENTIFICATION ACCORDING TO CHARLES QUIBELL.	
SEEN IN SAN ANTONIO CRK MARSH IN 1977 1.2 PLANTS IN 1978 NONE IN 1982 1986 OR 1993 SOME SUITABLE HARITAT STILL EXISTS RUYCH SUSGESTS THAT THIS OCCURRENCE MAY BE A MISLID C. MARIT	THREATENED BY FILLING
ANY SALERE OF INFORMATION FOR THIS OCCURRENCE IS A 1016 COLIFICIAL OVER THE REPORT OF INFORM	THERE HAS BEEN EVEN ONE REVELOPMENT IN THIS MONITY
SITE IS DEGRADED BY PAST AGRICULTURAL PRACTICES. 4 ADULTS WERE OBSERVED ON 8 JUN 1994; ALTHOUGH NO JUVENLES WERE OBSERVED, LANDOWNER REPORTS THAT THE TURTLES ARE REPRODUC	THREATENED BY PROPOSED VINEYARD EXPANSION.
30 ADULTS AND 15 JUVENILES OBSERVED BASKING AND FLOATING IN FOUR PONDS ON 25 JUL 2016.	VINEYARD ENCROACHMENT.
8 APR 2003: 4 ADULTS, INCLUDING 3 LARGE MALES AND 1 LARGE FEMALE, OBSERVED. 2003 MAPPED AS A. MARIMORATA, 2008 REMAPPED AS A. MARIMORATA MARIMORATA. 26 JUL 2007: 1 ADULT OBSERVED IN	
143 CAPTURED; FORK LENGTH RANGE: 60-315 MM; MAJORITY IN 2 AGE GROUPS: 60-70 MM AND 140-180 MM. FISH RELOCATED UNDER EMERGENCY PERMIT FROM USEWS.	FISH WERE FOUND IN DEWATERED REACH DURING USACE FLOOD CONTROL PROJECT.
ON 2 JUN 1998.1 ADULT FOUND IN AN ABANDONED 4-FT DIAMETER BRICK WELL ADJACENT TO THE TRIBUTARY, 4 ADULTS FOUND IN A PERENNIAL POOL ALONG THE CREEK ON 18 SEP 2001. A COLLECTION W	THREATS INCLUDE PRESENCE OF BULLFROGS, CATTLE GRAZING, AND PROPOSED RESIDENTIAL DEVELOPMENT.
A ADULT O RECORDER Y SOME OF DED FINENIE ES E INFAND 1. HINCHIE OS MAN CADADACE LENOTAL	TUBERT INCH LIDER BEORDONI TO CHEAD CHANNEL OF DEDDIS AND BEI ISU
2 POLICI OF DESIGN CONTRACTOR AND A POLICIE (20 MIN CONTRACTOR OF DATA DE LA CONTRACTOR OF DATA DE LA CONTRACTOR AND A DE LA CONTRACTOR A	The Provide Street of the Control of the Control of the Street of the St
SITE FING BEEN OLOUPIED IS I BAUGENS FUR AR ESTIMATED TO TEARS OF DUCAE, RESILENTE, UDITENT DERIS, TANLE, AND FURNISMEN METED IN 2003, AN AUGULT FEMALE FUUND EMAGNED AND F	Intracticed by Provided Development, Interfic, and Human & Dog activities.
1-2 BIRDS AURALLY DETECTED ON 3 APR 2012; "KURP" CALL HEARD SEVERAL TIMES IN RESPONSE TO BROADCAST TAPED "KKK-KKK-KERR" VOCALIZATION.	FERAL CATS AND RAPTORS.
2 AURAL DETECTIONS MADE ON 21 FEB 2014 DURING WALKING TRANSECT SURVEYS. AT LEAST 1 AURALLY DETECTED ON 18 MAR 2015.	
2 ADULTS AND 27 YOUNG-OF-YEAR OBSERVED IN 3 PONDS ON 5 AUG 2016.	CONVERSION TO VINEYARDS.
2 ADULTS OBSERVED ON 3 MAY 2010. 1 ADULT AND 2 EGG MASSES OBSERVED ON 10 MAY 2018. 1 OBSERVED ON 10 JUN 2018. 1 EGG MASS OBSERVED ON 24 APR 2019.	FREQUENT DISTURBANCE FROM FLOOD CONTROL ACTIVITIES AND SURROUNDING URBANIZATION.
7 WPT AND 1 SLIDER OBSERVED IN MARSHY CHANNELS ON NORTH SIDE OF SHOLLENBERGER PARK. TURTLES WERE BASKING ON DOWNED CATTAILS AND 1 013	EXOTIC RED-EARRED SLIDERS PRESENT.
AN LINKNOWN NI UNDER ORGENIED ON 25 MAR 2002	THREATENED BY PROPOSED VINEYARD EXPANSION: STREAM WILL BE PROVIDED AS A SETRACK AND POWING WILL BE EVENINED
	THE STATE OF THE STATE OF THE THE OF THE THE OF THE THE OF
PUPULAUUN HINSI SEEN IN 2011, NEVISI IEU IN 2012, 2013 & 2019. UNKNOWN NUMBER OF PLANTS OBSERVED, THOUGH THIS POPULATION IS REPORTEDLY LARGER THAN OCCURRENCE #1 WITH A COMBINED	PUSSIBLE THREAT FHUM GRAZING DISTURBANCE.
3 TADPOLES CAUGHT AND RELEASED ON 16 MAY 2017 FROM MARSHY AREA OF CREEK IN RIPARIAN CLEARING.	
1 DEAD ADULT OBSERVED ON SIDE OF ROAD ON 14 AUG 2016.	VEHICLE COLLISIONS, AGRICULTURE.
2 ADULTS OBSERVED ON 29 APR 1994.	THREATENED BY WASTEWATER TREATMENT PLANT EXPANSION.
AN UNKNOWN NUMBER OBSERVED ON 25 MAR 2002.	THREATENED BY PROPOSED VINEYARD EXPANSION: STREAM WILL BE PROVIDED AS A SETBACK AND PONDS WILL BE EXPANDED.
- 10 INFINITUAL & OBSERVED ON 17 UN 1000	TUBEATENED BY VANEYARD EVBANSION ON SUITABLE SOULS AND SLOPES
	Intreatened by Vinetand Expansion on Soliable Solis and Scores.
I BRI FUORD AND NULED BY HOUPING CONTRACTOR DURING RE-ROUPING OF 2 STORY VICTORIAN.	nuurina.
1 ADULT OBSERVED BASKING ALONG SHORE.	THREATS INCLUDE LARGEMOUTH BASS & BULLFROGS.
1 INDIVIDUAL (3** SV LENGTH) OBSERVED ON 24 MAY 2001.	THREATENED BY DREDGING (SITE WAS DREDGED IN 2000) AND PROPOSED CHANNEL / DEBRIS / VEGETATION CLEARING.
10,000 PLANTS OBSERVED IN 2011 WITH 1005 TO 10005 OF INDIVIDUALS IN EACH SUBPOPULATION. ID OF PLANTS NEEDS FURTHER STUDY, PLANTS OUTSIDE OF TIBURON AND OAKLAND HILLS ARE DIFFICULT	INVASIVE GRASSES: AVENA BARBATA, BRACHYPODIUM DISTACHYON (MINOR THREAT).
10.000 PLANTS OBSERVED IN 2011 WITH 1005 TO 1000S OF INDIVIDUALS IN EACH SUBPOPULATION. PROVIDED INFORMATION IS EXACTLY THE SAME AS THAT PROVIDED FOR ERIOGONUM LITEOLUM VAR. CAN	INVASIVE GRASSES: AVENA BARBATA, BRACHYPODIUM DISTACHYON (MINOR THREAT).
10 000 PLANTS ESTIMATED IN 2011 OVERALL POPULATION APPEARS TO BE VERY HEALTHY WITH 100% OF INDMDIALS, PLANTS WERE ORDERATED IN SUID OVER A TOAN OWNERN CAREARD DOI & TOAN	
TO ANTE OPERATING MARK ATTUENT TO TOTAL TO ANTE UNIT AND AND ADDRESS OF ADDRESS AT A TAXABLE TO TAXABLE AND ADDRESS AT A	
THE DEVICE ON AND IN A STATE OF THE O	
ON 22 OCT 2006, P. KOBERNUS FOUND 1 ADULT BADGER DOR ON HWY 101, NEAR MEDIAN, KILLED BY A CAR.	TRAFFIC ON HWY 101, DISKING OF GRASSLANDS AND FIELDS.
1 ADULT AND 2 JUVENILES OBSERVED (EACH OCCUPYING A SEPARATE POOL) ON 29 APR 2005.	THREATENED BY RUNOFF FROM UPLAND HOUSES (CHEMICAL YARD TREATMENTS, FERTILIZERS).
1 ADULT OBSERVED ON 25 MAY 2007.	THREATENED BY HIGHWAY 101 BRIDGE WORK PROPOSED FOR 2009 OR 2010.
2 ADULTS CAPTURED ON 19 AUG 2007.	
2 ADULTS OBSERVED ON 3 JULY 2008, RESIDENTIAL DEVELOPMENT LOCATED ON BOTH SIDES OF CHANNEL. THERE IS BANK EROSION UPSTREAM AND SOME STORM ORAIN CHIVERTS, OLIMITY COMPARED T	THREATS MAY INCLUDE FUTURE MAINTENANCE ACTIVITIES OR PUBLIC ACCESS.
2 ANULTO ODCEDED DAGVING ON 7 TIM 1000	
20 ADULIS UBSERVED UN 19 ADIG 2004, 24 ADULIS AND 8 EGG MASSES OBSERVED ON 24 FEB 2005, 3 ADULIS OBSERVED ON 7 JUN 2007.	PUSSIBLE THREAT FRUM RESIDENTIAL DEVELOPMENT, ALTHOUGH MITIGATION SHOULD CREATE 0.7-ACRE OF CREATED WETLANDS.
20 ADULTS AND OVER 100 JUVENILES OBSERVED ON 2 JUN 2003.	THREATENED BY POTENTIAL DEVELOPMENT ON THE EAST SIDE OF THE PROPERTY.
1 ADULT OBSERVED AT THE BURROW ON 24 NOV 2005.	THREATENED BY CONVERSION TO VINEYARDS (PROPERTY IS FOR SALE AND VINEYARDS ARE FOUND IN THE VICINITY).
10 ADULTS AND 5 JUVENILES OBSERVED ON 6 MAY 2001.	THREATENED BY AGRICULTURAL CONVERSION FROM CATTLE TO VINEYARDS.

THREATLIST	LASTUPDATE	AREA	PERIMETER	AVLCODE	NEAR_DIST
Development	20200703	303895230.8	71530.80344	99912	0
	20141112	201051721.9	50264.84445	21001	0
	20111206	201051719.3	50264.844	21001	3.893976113
	20040204	151947286.4	49660.90904	99901	0
Development; ORV activity; Other	20150226	20584793.24	39915.38494	20303	1.758081157
	20000120	20584793.24	39915.38494	30303	1.758081157
	20121203	20584793.24	39915.38494	20303	1.758081157
	20150911	10221517.23	16219.24922	20301	1.634973086
Landfil	20050204	9239924.347	22818.77343	20301	1.758642754
	20050419	8042068.898	10052.9689	20901	0
	20151210	8042068.818	10052.96885	20901	3.074052384
	20040930	8042068.815	10052.96885	20901	1.582104069
	20040825	8042067.242	10052.96821	10901	3.861381953
	20180411	8041668.925	10052.84377	20901	4.181181512
	20151210	8007705.943	10044.12068	20912	0
	20080102	0007705.943	10044.12068	10912	0
	10060607	9007705.042	10044.12068	10012	0
	201/0822	9007705.042	10044.12068	10912	0
	20140620	9007705.042	10044.12000	20012	0
	10041012	9007705.042	10044.12068	10012	0
	20160606	8007705.943	10044.12068	10912	0
	20190100	9007705.0/2	10044 12069	10012	-
	20180220	8007705.943	10044.12068	10912	0
	20181214	8007705.049	10044 12069	10912	
	19890811	8007670.554	10044,10748	109012	4.841194409
	20170328	7931234,206	18995.19798	20301	3.289810565
	20141107	7551675.047	16591.15132	20301	2.69466687
	20200909	5781464.333	38772.04175	20301	4.795487741
	20000114	3141485 583	6283 154181	10701	4 223567123
Development: Erosion/runoft: Other: Over-collecting/poaching: Surface water diversion: Vandalism/dumping/litter	20160823	1917060.711	23980.66972	20301	0.780253117
Development	20150928	1251620.92	22803.27469	20301	4.64277149
	20050330	1130890.878	3769.842451	20601	4.252375682
Erosion/runoff	20190325	991697.7465	12471.06836	20301	2.251852042
	20170125	745996.1614	3429.463636	20301	1.838523442
	20000120	578241.2618	3753.896786	20302	0.343180672
	20150227	578241.2618	3753.896786	20302	0.343180672
	20170125	324516.2995	3242.123416	20301	2.006389389
	20150911	303220.0096	2440.448677	20301	0.617301342
	20110816	290945.0709	3884.514104	10302	1.337492052
	20140321	290945.0709	3884.514104	10302	1.337492052
Other	20130605	281519.114	1883.266656	10501	4.760689503
Development	20081120	280309.6611	3755.828475	10301	4.008000594
Agriculture	20021119	187814.7307	2588.996153	20201	3.656444928
Agriculture	20170405	172687.2711	1693.421331	20201	2.047563747
	20080225	168624.7421	2354.788075	20201	2.102566482
Altered flood/tidal/hydrologic regime; Surface water diversion	20000502	148862.5572	2111.749815	20201	1.276547405
Development; Grazing; Non-native animal impacts	20190919	109337.3561	1597.193226	20301	2.305152762
Other	20011016	102830.9307	1536.713954	20301	3.230401443
Development	20110315	71435.60642	1525.149143	20201	2.112165442
Non-native animal impacts; Other	20170119	70685.16679	942.4754353	20401	1.455740414
	20170119	70685.11837	942.5840719	20401	0.795684486
Agriculture	20170405	60218.63211	1507.339564	20201	2.178929131
Altered flood/tidal/hydrologic regime; Development	20190703	58970.59215	988.1293805	20201	1.245499648
	20080505	56446.24861	950.5667638	20301	1.15965369
Agriculture	20021104	26400.32991	789.757791	20201	4.27406029
Grazing	20200123	20105.9731	502.6743897	10101	4.787801926
	20180516	20105.88305	502.6530409	20101	4.570067708
Agriculture; Vehicle collisions	20170106	20105.84508	502.6525662	20101	2.281115846
Development	20070510	20024.44073	502.1718435	20101	2.212148276
Agriculture	20021119	20023.4709	502.1382455	20101	4.099310299
Agriculture	20020905	20023.46746	502.1382044	20101	3.964128011
Other	20000829	20023.39326	502.1372717	20101	0.305054464
Non-native animal impacts	20011015	20023.35169	5u2.1367507	20101	4.939182912
Unannercation	20010809	20023.34723	5U2.1366929	20101	3.311905373
Non-maine paint impacts	20140721	20023.32626	502.136431	10102	+.//2253/45
NOT-THENNE PARTS INFORMATION	20180424	20023.32626	502.136431	10102	4.//2253/45
	20150717	20023.32622	502.136431	10102	3.451//2218
Andre Mener President's construction function	20150618	20023.32622	502.136431	10102	3.451//2218
Agnositure; Holestran construction/maint.	200/1217	20023.32514	502.1364268	20101	*.9452/078
Readinal construction/maint	20050629	20023.32453	502 1364014	20101	4.380283417
	20070006	20022.22449	E02 1264014	20101	1.420000201
Other Berreational use (nm.OBM	20070823	20023.3244	502 1364014	20101	1.544505105
Content, rescretation and unate (mach-URW)	20090313	20023.32452	502 1204014	20101	2.096102000
Development	200+1108	20023.32432	502 1364014	20101	2.029550305
Development	20070725	20023.32386	502 1364014	20101	1.480055279
	20050715	20023 2220	502 12640**	30101	4.872506267
Andread and	20060307	44004 44000	502.1304014	20101	