Appendix BIO

Planning Survey Report



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PLANNING SURVEY REPORT (PSR) SOLAR RV/BOAT AND MINI-STORAGE, 3478 PITTSBURG-ANTIOCH HIGHWAY, PITTSBURG, CA 94565. APN 074-100-018. CONTRA COSTA COUNTY APPLICATION AP-17-1278 (PPR). MHBA FILE 0907-2121-3760.

1.0 INTRODUCTION

During September and October, 2021, a Planning Level and Species-Specific Biological Resource Evaluation and Wetland Determination was conducted by Marcus H. Bole & Associates (MHBA) on a 12.51-acre study area of ruderal non-native grasslands (subject property) located at 3478 Pittsburg-Antioch Highway, Pittsburg, Contra Costa County, California. The subject property is located on the U.S. Geological Survey (USGS) Antioch North 7.5-minute quadrangle, Township 13 North, Range 1 East, Los Medanos Land Grant. The majority of the subject property is relatively flat with elevations ranging from approximately 20 feet to 40 feet above sea level near the eastern and southern perimeters of the project site. The Contra Costa Canal is located immediately to the east and off the property and will not be affected by the proposed development of the Solar RV/Boat and Mini-Storage project. The Contra Costa Canal is a man-made feature that is classified as an aqueduct. As such, no set-back from the canal is mandated or recommended.

MHBA'S onsite evaluations confirmed that land cover within the subject property consists of ruderal non-native grassland habitat (11.57-acres), graveled surfaces (0.56-acres), and one seasonal wetland (0.39-acres). A field verified land cover map is attached (Attachment A).

The proposed development will be a self-storage facility consisting of prefabricated, modular storage units on 9.2-acres. The storage units will be placed on an asphalt parking lot. The project is proposing to screen the units with use of landscaping and wrought iron fencing. In addition, the project will include a solar generation facility. The project will result in 9.2-acres of permanent impacts to ruderal non-native grasslands subject to mitigation through the East Contra County Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP).

2.0 METHODOLOGY

Field surveys of biological resources included a reconnaissance-level evaluation of plants and animals observed in and near the subject property, habitat assessments for special status plant and wildlife species, and a determination of wetland habitats within the subject property. Biological and botanical surveys were conducted based on the California Department of Fish and Wildlife's (CDFW) Natural Diversity Database (CNDDB, October 2021), the United States Fish & Wildlife Service's (USFWS) IPaC Resource List, the California Native Plant Society's (CNPS) list of rare and endangered plants and the East Contra County HCP/NCCP) database of Covered Species and Conditions on Covered Activities. All species lists were derived from the United States Geological Survey (USGS) "Antioch North, Antioch South, Brentwood, Jersey Island, Rio Vista, Birds Landing, Denverton, Honker Bay and Clayton" 7.5 minute quadrangles. Based on the results of the species lists, appropriate biological and botanical surveys were conducted. Species habitat surveys were conducted during the September-October 2021 time period by Marcus H. Bole & Associates' (MHBA) Senior Wildlife Biologist Marcus H. Bole¹. The species habitat surveys were conducted by walking all areas of the property (and surrounding 500 foot buffer) and evaluating potential habitat for special-status species based on vegetation composition and structure, surrounding area, presence of predatory species, microclimate, and available resources (e.g. prey remains, nesting burrows, cast pellet, eggshell fragments, excrement, etc.). A general botanical survey and habitat evaluation for rare plant botanical species was conducted during the September-October 2021 time period by MHBA's senior botanist Charlene J. Bole. The general botanical survey and habitat evaluation for rare plant botanical species was conducted by walking all areas of the property area while taking inventory of general botanical species and searching for special-status plant species and their habitats. A determination of Waters of the U.S. was conducted on October 8, 2021 by Senior Wetland Scientist Marcus H. Bole and was conducted under the guidelines of the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (2008).

2.1 Regulatory Requirements

The following describes federal, state, and local environmental laws and policies that are relevant to the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) review process.

Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (ESA) in 1973 to protect species that are endangered or threatened with extinction. The ESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. The ESA makes it unlawful to "take" a listed animal without a permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct". Through regulations, the

¹ Marcus H. Bole is a Senior Wildlife Biologist and Senior Wetland Scientist and an East Contra County HCP/NCCP approved biologist. Resume is Attachment E.

term "harm" is defined as "an act which actually kills or injures wildlife". Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e. exotic) species (50 Code of Federal Regulations §10.13). Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance has the potential to affect bird species protected by the MBTA.

Waters of the United States, Clean Water Act, Section 404

The US Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into jurisdictional waters of the United States, under the Clean Water Act (§404). The term "waters of the United States" is an encompassing term that includes "wetlands" and "other waters". Wetlands have been defined for regulatory purposes as follows: "those areas that are inundated or saturated by surface or groundwater 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 (33 CFR 328.3, 40 CFR 230.3). Wetlands generally include swamps, marshes, bogs, and similar areas." Other Waters of the United States (OWUS) are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark but lack positive indicators for one or more of the three wetland parameters (i.e., hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4). The USACE may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits are general permits issued to cover particular fill activities. All nationwide permits have general conditions that must be met for permits issued for a particular project, as well as specific regional conditions that apply to each nationwide permit. Until recently, isolated swales and ephemeral drainages would not have been considered United States Army Corps of Engineers jurisdictional in accordance with the U.S. Environmental Protection Agency's Navigable Waters Protection Rule (NWPR). However, on August 30, 2021, in the case of Pascua Yaqui Tribe v. U.S Environmental Protection Agency, the U.S. District Court for the District of Arizona vacated and remanded the NWPR. In light of this order, the U.S. Environmental Protection Agency and the USACE have halted implementation of the NWPR and, until further notice, are interpreting "waters of the United Sates" consistent with the pre-2015 regulatory regime. Therefore, seasonal swales if they meet the criteria set forth in the *United States Army Corps of Engineers Wetlands* Delineation Manual (1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (2008), would now be considered an "other Water of the

United States" and subject to federal jurisdiction in accordance with the Clean Water Act (consistent with the pre-2015 regulatory regime 40 CFR 230.3(s). Any impact to the seasonal swale would be subject to mitigation measures in accordance the USACE directives and mitigation measures outlined in the East Contra Costa HCP/NCCP.

Clean Water Act, Section 401

The Clean Water Act (§401) requires water quality certification and authorization for placement of dredged or fill material in wetlands and OWUS. In accordance with the Clean Water Act (§401), criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. The resulting requirements are used as criteria in granting National Pollutant Discharge Elimination System (NPDES) permits or waivers, which are obtained through the Regional Water Quality Control Board (RWQCB) per the Clean Water Act (§402). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the ESA, but pertains to state-listed endangered and threatened species. The CESA requires state agencies to consult with the CDFW when preparing documents to comply with the CEQA. The purpose is to ensure that the actions of the lead agency do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species. In addition to formal listing under the federal and state endangered species acts, "species of special concern" receive consideration by CDFW. Species of special concern are those whose numbers, reproductive success, or habitat may be threatened.

California Fish and Wildlife Code

The California Fish and Wildlife Code (CFWC) (§3503.5) states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (all owls except barn owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto". Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFWC (§3503) also states that "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto".

Rare and Endangered Plants

The CNPS maintains a list of plant species native to California with low population numbers, limited distribution, or otherwise threatened with extinction. This information is published in the

Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-ranked plants receive consideration under CEQA review. The CNPS California Rare Plant Rank (CRPR) categorizes plants as the following:

Rank 1A: Plants presumed extinct in California;

Rank 1B: Plants rare, threatened, or endangered in California or elsewhere;

Rank 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere;

Rank 3: Plants about which we need more information; and

Rank 4: Plants of limited distribution.

The California Native Plant Protection Act (CFGC §1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered as defined by CDFW. An exception to this prohibition allows landowners, under specific circumstances, to take listed plant species, provided that the owners first notify CDFW and give the agency at least 10 days to retrieve (and presumably replant) the plants before they are destroyed. Fish and Wildlife Code §1913 exempts from the 'take' prohibition 'the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way".

California Environmental Quality Act Guidelines §15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines §15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled based on the definition in the ESA and the section of the CFGC dealing with rare, threatened, and endangered plants and animals. The CEQA Guidelines (§15380) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (e.g. candidate species, species of concern) would occur. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan

The East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) is intended to provide an effective framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts on endangered species. The Plan will allow Contra Costa County (County), the Contra Costa County Flood Control and Water Conservation District (County Flood Control District), the East Bay Regional Park District (EBRPD) the Cities of Brentwood, Clayton, Oakley, and Pittsburg and the Implementing Entity that will be established to implement the Plan (collectively, the Permittees) to control endangered species permitting for activities and projects in the region that they perform or approve. The Plan will also provide for comprehensive species, wetlands, and ecosystem conservation and contribute to the recovery of endangered species in northern California. The Plan will avoid project-by-project permitting that is generally costly and

time consuming for applicants and often results in uncoordinated and biologically ineffective mitigation. The Permittees are asking the U.S. Fish and Wildlife Service (USFWS) to issue to them a 30-year permit that authorizes incidental take on listed species under the federal Endangered Species Act (ESA). The Permittees are also asking the California Department of Fish and Game (CDFG) to issue to them a 30-year permit that authorizes take of all covered species under the Natural Community Conservation Planning Act (NCCPA). The local jurisdictions will then be able to use those permits to extend take authorization to development and other activities that meet the terms of the Plan. USFWS and CDFG will also provide assurances to local jurisdictions and Plan participants that no further commitments of funds, land, or water will be required to address impacts on covered species beyond that described in the Plan. Local jurisdictions will provide similar assurances to local applicants.

This Plan proposes to provide take authorization for 28 listed and non-listed species (i.e., covered species). The Plan includes conservation measures to protect all 28 covered species, whether or not they are currently listed. Accordingly, should any non-listed covered species become listed during the permit term, additional conservation measures will not be required. Species proposed for coverage include: Townsend's western big-eared bat, Longhorn fairy shrimp, San Joaquin kit fox, Vernal pool fairy shrimp, Midvalley fairy shrimp, Tricolored Blackbird, Vernal pool tadpole shrimp, Golden Eagle, Western Burrowing Owl, Mount Diablo manzanita, Swainson's hawk, Brittlescale, San Joaquin spearscale, Silvery legless lizard, Big tarplant, Alameda whipsnake, Mount Diablo fairy lantern, Giant garter snake, Recurved larkspur, Western pond turtle, Round-leaved filaree, Diablo helianthella, California tiger salamander, Brewer's dwarf flax, California red-legged frog, Showy madia, Foothill yellow-legged frog, and Adobe navarretia.

3.0 SETTING

The subject property is a 12.51-acre vacant, undeveloped parcel located on the Pittsburg-Antioch Highway in the City of Pittsburg, California (APN 074-100-018). The subject property is located in a rural-industrial part of the city and is bordered by industrial/commercial development to the east and west, Union Pacific railroad tracks to the south, and the Pittsburg-Antioch Highway to the north. The vegetative community descriptions and nomenclature described in this section generally follow the classification system provided in Sawyer and Keeler-Wolf's *A Manual of California Vegetation* (1995), Mayer and Laudenslayer's *A Guide to Wildlife Habitats of California* (1988), and the *Jepson Manual*, 2nd edition (Hickman 1993).

4.0 RESULTS

4.1 Description of the Existing Biological and Physical Conditions

The following describes the biological and physical conditions within the property and within the surrounding area.

4.1.1 Property Description

The property is a 12.51-acre parcel within the East Contra Costa HCP/NCCP Development Fee Zone 1. The majority of the property (11.57-acres) is ruderal, non-native grasses and forbs. A small area has been graded and filled with gravel (0.56-acres). A small, well-defined seasonal wetland (0.39-acres) is located in the northeastern portion of the property.

4.1.2 Physical & Biological Conditions

Disturbed, Ruderal, Non-Native Grassland

Vegetation in the majority of the property consists of ruderal, non-native grasses and forbs. The property has been graded and lightly disked. Disturbed, ruderal, non-native grasslands are those dominated by plant species introduced by humans and established or maintained by human disturbances or activities. Some areas are entirely artificial such as those that have been filled with gravel to provide year around vehicle access. Ruderal vegetation is dominated by soft chess (*Bromus hordeaceus*), slender wild oats (*Avena barbata*), red brome (*Bromus madritensis spp.*), mustard (*Hirscheldia spp. & Brassica nigra*), and meadow fescue (*Festuca pratensis*).

Native and introduced wildlife species are tolerant of human activities (road traffic, surrounding commercial/industrial activities) in disturbed non-native grassland habitats. Common wildlife observed onsite include the northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), Western meadowlark (*Sturnella neglecta*), American robin (*Turdus migratorius*), and the American pipit (*Anthus rubescens*). Also observed are mammals such as raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), house mouse (*Mus musculus*), and the black-tailed jackrabbit (*Lepus calif*ornicus).

Seasonal Wetlands

A small (0.39-acre) seasonal wetland was evaluated and delineation in the northeastern portion of the property. The seasonal wetland is dominated by creeping spikerush (*Eleocharis macrostachya*), annual beard grass (*Polypogon monspeliensis*), broadleaf pepperweed (*Lepidium latifolium*), common tule (*Schoenoplectus acutus var. occidentalis*), and Mediterranean barely (*Hordeum marinum ssp. gussoneanum*). A single red willow (*Salix laevigata*) and a Fremont's cottonwood (*Populus fremontii*) were observed along the edges of the seasonal wetland. Wetland Data Sheets were prepared for all areas that exhibited a potential to support wetland habitats (Appendix D)

Special Status Plant Species

According to the CDFW's CNDDB, more than 23 special-status plant species are known to occur in the vicinity of the subject property. These plants occur is specialized habitats, i.e., brackish and freshwater marshes, swamps, and riparian scrub. It is highly unlikely that special-status plants occur within the subject property since the project area has been extensively disturbed over the years and there are areas of gravel scattered over the ground. No impacts to rare plants are expected.

According to CDFW's CNDDB, more than 15 special-status wildlife species are known to occur in the vicinity of the subject property. The only special status species that has the potential to occur on or in the immediate vicinity of the subject property is the western burrowing owl (*Athene cunicularia*). The Contra Costa County HCP has indicated that the property's ruderal grassland habitat is considered suitable breeding and foraging habitat for the western burrowing owl. During onsite surveys MHBA's biologists did not detect the presence of the owl; however, the site does support the California ground squirrel that typically provides the burrows used by the western burrowing owl for nesting and general habitation in the region of the subject property. Only a few burrows were found onsite and those burrows did not exhibit the presence of the owl (molted feathers, cast pellets, prey remains, eggshell fragments, or excrement).

4.2 Regional Species and Habitats of Concern

The following table is a list of species that have the potential to occur within or near the subject property and is composed of special-status species within the Antioch North, Antioch South, Brentwood, Jersey Island, Rio Vista, Birds Landing, Denverton, Honker Bay and Clayton" 7.5 minute quadrangles. Species lists reviewed, and which are incorporated in the following table, include the CDFW, USFWS, CNDDB and Contra Costa County HCP/NCCP species lists for those special status species within five miles of the subject property. Species that have the potential to occur within the project area are based on an evaluation of suitable habitat to support these species and observations made during biological surveys. Not all species listed within the following table have the potential to occur within the project area based on unsuitable habitat.

Table 1. Listed and Proposed Species Potentially Occurring or Known to Occur within five miles of (APN 074-100-018)

Common Name (Scientific Name)	Status Fed/State/ CNPS	General Habitat Description	Habitat Present/ Habitat Absent	Rationale
Valley elderberry longhorn beetle (Desmocerus californicus dimorphus)	FT/_/_	Blue elderberry shrubs usually associated with riparian areas.	А/НА	There are no elderberry shrubs within the property or within 1,000 feet of the property.
Vernal pool fairy shrimp (Branchinecta lynchi)	FT/_/_	Moderately turbid, deep, cool-water vernal pool.	A/HA	There are no vernal pools within or near the property.

Common Name (Scientific Name)	Status Fed/State/ CNPS	General Habitat Description	Habitat Present/ Habitat Absent	Rationale
Vernal pool tadpole shrimp (Lepidurus packardi)	FE/_/_	Vernal pools, swales, and ephemeral freshwater habitat.	А/НА	There are no vernal pools within or near the property.
REPTILES AND AMP	HIBIANS			
California red-legged frog (Rana draytonii)	FT/SSC/_	Quiet pools of streams, marshes and occasionally ponds. (sea level - 4,500 ft elevation)	A/HA	There is no suitable habitat within or near the property. None observed.
Giant garter snake (Thamnophis gigas)	FT/ST/_	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes ponds, sloughs, small lakes, and there associated uplands.	А/НА	There is no suitable habitat within the property. None observed.
Western pond turtle (Emys marmorata)	_/_/SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches. Needs basking sites and suitable upland habitat.	A/HA	There is no suitable habitat within or near the property. None observed.
California tiger salamander (Ambystoma californiense)	FT/ST/_	Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	A/HA	There is no suitable habitat within or near the property to support this species.
FISH				
Delta smelt (Hypomesus transpacificus)	FT/SE/_	Sacramento-San Joaquin Estuary	A/HA	The Sacramento River is not part of this project.
BIRDS				
Least Bell's Vireo (Vireo belli pusillus)	FE/SE/_	Nests placed along margins of bushes or on twigs projecting into pathways, usually willows, baccharis, mesquite. Low riparian in dry river bottoms.	A/HA	There is no suitable habitat for this species within or near the property. None observed.
Song swallow (Riparia riparia)	_/_/SSC	Last found in Sacramento area in 1877. Nest made of	A/HA	There is no suitable habitat for this species within

Common Name (Scientific Name)	<u>Status</u> Fed/State/ CNPS	General Habitat Description	Habitat Present/ Habitat Absent	Rationale
		decayed grasses, bit of tule and dead leaves.		or near the property.
Western burrowing owl (Athene cunicularia)	MBTA/SSC/_	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	A/HP	There is suitable habitat for this species within the property. Preconstruction surveys and Biological monitoring recommended.
Swainson's hawk (Buteo swainsoni)	MBTA/ST/_	Open grasslands and shrub lands.	A/HP	Property supports suitable foraging habitat. CNDDB lists nest trees within ½ mile of property.
Tri-colored black bird (Agelaius tricolor)	MBTA/SSC/_	Marshes and swamps, agricultural irrigation ditches, blackberry brambles and grasslands	A/HA	There is no suitable habitat for this species within or near the property.
Western yellow- billed cuckoo (Coccyzus americanus occidentalis)	FC/SE/_	Open woodlands, riparian areas, orchards and moist, overgrown thickets	А/НА	There is no suitable habitat for this species within or near the property. None observed.
White-tailed kite (Elanus leucurus)	MBTA/_/_	Open grasslands, meadows, or marshes for foraging, dense-topped trees for nesting and perching	A/HP	Property supports suitable foraging habitat. CNDDB lists nest trees within 5 miles of property. None observed.
Bank swallow (Riparia riparia)	_/ST/_	Nests in riparian and other lowland habitats. Requires vertical banks/cliffs with finetextured/sandy soils near streams, rivers, lakes and ocean to dig nesting hole.	А/НА	There is no suitable habitat for this species within or near the property. None observed.
MAMMALS		Deart in lange to median		TI :
Hoary bat (Lariurus cinereus)	_/_/_	Roost in large to medium sized trees with dense foliage.	A/HA	There is no suitable habitat for

Common Name (Scientific Name)	<u>Status</u> Fed/State/ CNPS	General Habitat Description	Habitat Present/ Habitat Absent	Rationale
				this species within or near the property. None observed.
PLANTS				
Keck's checkerbloom (Sidalcea keckii)	FE/_/1B.1	Cismontane woodland, valley and foothill grassland. Grassy slopes in blue oak woodland, on serpentinederived, clay soils.	А/НА	There is no suitable habitat for this species within or near the property. None observed.
Ferris' milk-vetch (Astragalus tener var. ferrisiae)	_/_/1B.1	Meadows and seeps, valley and foothill grassland. Subalkaline flats, usually seen in dry, adobe soils.	А/НА	There is no suitable habitat for this species within or near the property. None observed.
Palmate-Bracted Bird's Beak (Chloropyron palmatum)	FE/SE/1B.1	Chenopod scrub, valley and foothill grassland. Usually on Pescadero silty clay which is alkaline, with <i>Distichlis</i> , <i>Frankenia</i> , etc.	A/HA	There is no suitable habitat for this species within or near the property. None observed.

CODE DESIGNATIONS

FE = Federal-listed Endangered FT = Federal-listed Threatened FPE = Federal Proposed Endangered

FPT = Federal Proposed Threatened FC = Federal Candidate Species

MBTA = Protected by the federal Migratory Bird Treaty Act

SE = California State-listed Endangered **ST** = California State-listed Threatened SR = California State-listed Rare

SSC = California State Species of Special Concern

SC = California Candidate **S1** = State Critically Imperiled **S2** = State Imperiled

S3 = State Vulnerable

S4 = State Apparently Secure

A = Species Absent

P = Species Present

HA = Habitat Absent **HP** = Habitat Present

CH = Critical Habitat MH = Marginal Habitat

CNPS 1B = Rare or Endangered in California or elsewhere

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

CNPS 3 = More information is needed **CNPS 4** = Plants with limited distribution

0.1 =Seriously Threatened **0.2** = Fairly Threatened **0.3** = Not very Threatened

Project Impacts

With the implementation of preconstruction surveys and biological monitoring, there will be no direct or indirect impacts to the western burrowing owl. Direct impacts to all avian species will be avoided or minimized by beginning construction prior to the avian breeding season and/or

conducting a preconstruction nesting raptor/migratory bird survey prior to the start of construction activities if construction activities will begin during the avian breeding season. By beginning construction prior to the avian breeding season (between March 1 and August 30) there will be no active nests within ¼ mile of the property and direct impacts to avian species will not occur. Furthermore, beginning construction prior to the avian breeding season will also deter avian species from nesting within or within close proximity of the property, which will also avoid impacts to species. If active avian nests are found within 1,320 feet of the property, then construction buffers, as determined by a qualified biologist, will be established and no construction will occur within the buffer until the biologist has determined that the young have fledged.

Cumulative Effects

There are no foreseeable new actions that have potential to impact state and/or federally protected special status plant or wildlife species within or near the subject property, or contribute to cumulative negative effects to such species.

Table 2. Impacts and Recommended Avoidance/Minimization Measures

Target Species/ Communities	Impacts	Avoidance/ Minimization/ Mitigation Measures	
Natural Communities	None The majority of the subject property is disturbed, grad and does not support any natural plant or wildlife communities. The seasonal swale in the northeastern portion of the property has been largely undisturbed to being significantly lower in elevation from the majority of the property. Due to being lower in elevation and undisturbed, the swale supports a seaso wetland habitat.		
Special Status Plant / Wildlife Species	Avian species: prior to any ground disturbance of to covered activities, a USFWS/CDFW approved biologist will conduct a preconstruction survey of within 500 feet of the subject property. If active (with eggs or living young) are found within 1,3 of the project area, no activity shall be permitted might disturb or remove the active nests until the birds are able to leave the nest and forage on the Setback buffers for the nests will vary depending species affected and the location of the nest. Buffers are able to leave the nest and forage on the Setback buffers for the nests will vary depending species affected and the location of the nest. Buffers are able to leave the nest and forage on the Setback buffers for the nests will vary depending species affected and the location of the nest. Buffers are able to leave the nest and forage on the Setback buffers for the nests will vary depending species affected and the location of the nest. Buffers are also consultation with a California Department of Fis Wildlife/East Contra Costa HCP/NCCP approvers biologist.		
Seasonal Wetland Habitats	Less Than Significant with Mitigation Incorporated	The seasonal wetland within the northeastern portion of the subject property will be avoided and protected with a 25 foot buffer. During construction, the wetland and buffer will be fenced and protected with silt fence/straw worther. Signage will be installed prohibiting access to	

5.0 RESULTS: PERMITS AND TECHNICAL STUDIES FOR SPECIAL LAWS OR CONDITIONS

5.1 Federal Endangered Species Act Consultation Summary

The USFWS was contacted during September and October 2021, for a list of endangered, threatened, sensitive and rare species, and their habitats within and near the subject property. The list was derived from special-status species that occur or have the potential to occur within the USGS North Antioch 7.5" Quadrangle and eight surrounding quadrangles. The list was referenced to determine appropriate biological and botanical surveys and potential species occurrence within the project area. (See Appendix B).

5.2 Federal Fisheries and Essential Fish Habitat Consultation Summary

Essential fish habitat (EFH) means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (Magnuson-Stevens Fishery Conservation and Management Act (MSA) §3). There is no habitat within the project area that provides "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity," or special-status fish species managed under a fishery council (i.e chinook and coho). Therefore there is no EFH or the need for federal fisheries consultation.

5.3 California Endangered Species Act Consultation Summary

The CDFW was consulted during September and October 2021, for a list of endangered, threatened, sensitive and rare species, and their habitats within and near the subject property. The list was derived from special-status species that occur or have the potential to occur within the USGS North Antioch 7.5" Quadrangle and eight adjacent quadrangles. The list was referenced to determine appropriate biological and botanical surveys and potential species occurrence within the project area. (See Appendix B).

5.4 Wetlands and Others Water Coordination Summary

MHBA conducted a determination of Waters of the U.S. within the project area. Surveys were conducted on October 2021 by MHBA's Senior Wetland Scientist Marcus H. Bole. The surveys involved an examination of botanical resources, soils, hydrological features, and determination of wetland characteristics based on the *United States Army Corps of Engineers Wetlands Delineation Manual (1987); the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (2008);* the U.S. *Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook (2007);* the *U.S. Army Corps of Engineers Ordinary High Flows and the Stage-Discharge Relationship in the Arid West Region (2011);* and the *U.S. Army Corps of Engineers Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (2008).*

5.5 Determination of Waters of the United States

The intent of this determination is to identify wetlands and "Other Waters of the United States" that are present within the project area that could fall under the regulatory jurisdiction of the U. S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act. The 1987 Corps of Engineers Wetlands Delineation Manual identifies several methodologies and combinations of methodologies that can be utilized in making jurisdictional determinations. Marcus H. Bole & Associates has employed the Routine On-Site Determination methodology for this study (as supplemented by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, dated September 2008). The Routine On-Site Determination method uses a three-parameter approach (vegetation, soils and hydrology) to identify and delineate the boundaries of jurisdictional wetlands. To be considered a wetland, all three positive wetland parameters must be present. These parameters include (1) a dominance of wetland vegetation, (2) a presence of hydric soils, and (3) hydrologic conditions that result in periods of inundation or saturation on the surface from flooding or ponding. Further description of these parameters is provided below:

- 1) Vegetation. Wetland vegetation includes those plants that possess physiological traits that allow them to grow and persist in soils subject to inundation and anaerobic soil conditions. Plant species are classified according to their probability of being associated with wetlands. Obligate (OBL) wetland plant species almost always occur in wetlands (more than 99 percent of the time), facultative wetland (FACW) plant species occur in wetlands most of the time (67 to 99 percent), and facultative (FAC) plant species have about an equal chance (33 to 66 percent) of occurring in wetlands as in uplands. For this study, vegetation was considered to meet the vegetation criteria if more than 50% of the vegetative cover was FAC or wetter. Data sheets were prepared for areas that showed a potential to support wetland vegetation (Appendix D). Except for the seasonal wetland in the northeastern portion of the property, no wetland plant species were identified within the project area.
- 2) Hydric Soils. Hydric soils are saturated, flooded, or ponded in the upper stratum long enough during the growing season to develop anaerobic conditions and favor the growth of wetland plants. Hydric soils include gleyed soils (soils with gray colors), or usually display indicators such as low chroma values, redoximorphic features, iron, or manganese concretions, or a combination of these indicators. Low chroma values are generally defined as having a value of 2 or less using the Munsell Soil Notations (Munsell, 1994). For this study a soil was considered to meet the hydric soil criteria for color if it had a chroma value of one or a chroma of two with redoximorphic features, or if the soil exhibited iron or manganese concretions. Onsite soils were identified as a mixture of graded cut-and-fill material and Rincon clay loam. Rincon clay loam soils are not listed as "hydric soils"; however, where ponding of precipitation due to topological features (swales) occurs during a long enough time period in the growing season, hydric soil indicators may be found. Except for the seasonal wetland in the northeastern portion of the property, no hydric soils were identified within the project area.
- 3) Hydrology. Wetlands by definition are seasonally inundated or saturated at or near the surface. In order for an area to have wetland hydrology, it has to be inundated or saturated for

5% of the growing season (approximately 12 days) (USDA, 1967). Indicators include visual soil saturation, flooding, watermarks, drainage patterns, encrusted sediment and plant deposits, cryptogrammic lichens, and algal mats. The seasonal wetland in the northeastern portion of the subject property is within a swale that allows seasonal precipitation to pond for at least 5% of the growing season. It is in this area that wetland plants and soils were identified.

Wetland Determination Results

Using the methodologies described in the 1987 Wetland Delineation Manual, Marcus H. Bole & Associates evaluated and delineated a 0.39-acre seasonal wetland in the northeastern portion of the subject property. The seasonal wetland swale does not support vernal pool obligate plants and the soils do not appear to have a perched water table (duripan/hardpan) normally associated with vernal pools. The wetland swale is in an area that is significantly lower in elevation from the majority of the subject property and would be difficult to develop. The swale does not lie within a discernable drainage way, it was most likely created as a borrow pit when the Contra Costa Canal was constructed. The swale collects seasonal precipitation from a small watershed to the south of the swale. There is no exit (culvert) for precipitation to continue a northerly flow under the Pittsburg-Antioch Highway so it sits in the depression until it is subject to either evaporation or percolation. This swale will not be impacted by the current development plan and will be protected by a 25-foot buffer. During construction, the swale will be fenced off and protected by silt fencing/straw wattles, and have installed signage identifying the area as sensitive habitat (No Admission). No entry will be allowed within the protected buffer zone or seasonal wetland swale. Until recently, this isolated swale would not have been considered United States Army Corps of Engineers jurisdictional in accordance with the U.S. Environmental Protection Agency's Navigable Waters Protection Rule (NWPR). However, on August 30, 2021, in the case of Pascua Yaqui Tribe v. U.S Environmental Protection Agency, the U.S. District Court for the District of Arizona vacated and remanded the NWPR. In light of this order, the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers have halted implementation of the NWPR and, until further notice, are interpreting "waters of the United Sates" consistent with the pre-2015 regulatory regime. Therefore, the seasonal swale would now be considered an "other Water of the United States" and subject to federal jurisdiction in accordance with the Clean Water Act (consistent with the pre-2015 regulatory regime 40 CFR 230.3(s). Any impact to the seasonal swale would be subject to mitigation measures in accordance the Corps guidance and mitigation measures outlined in the East Contra Costa HCP/NCCP. The current development plan as proposed will avoid all impacts to the seasonal swale and provide an appropriate buffer around the swale with approved construction (silt/straw wattles) fencing and signage.

6.0 CONCLUSIONS AND RECOMMENDATIONS

According to the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) guidelines, a project is normally considered to have a significant impact on wildlife if it will interfere substantially with the movement of any resident or migratory fish or wildlife species; or substantially diminishes habitat quantity or quality for dependent wildlife and plant species. Impacts to special status species and their associated habitats are also considered

significant if the impact would reduce or adversely modify a habitat of recognized value to a sensitive wildlife species or to an individual of such species. Adherence to the East Contra Costa HCP/NCCP's directives, western burrowing owl preconstruction surveys, avoidance and minimization measures, and construction monitoring, project implementation will not result in significant impacts to the burrowing owl or migratory bird species, or any associated protected habitat. Any impact to the seasonal swale in the northeastern portion of the property would be subject to mitigation measures in accordance with USACE directives and mitigation measures outlined in the East Contra Costa HCP/NCCP. The current development plan as proposed will avoid all impacts to the seasonal swale and provide an appropriate buffer around the swale with approved construction (silt/straw wattles) fencing, biological monitoring and signage.

This concludes our Planning Survey Report (PSR) East Contra Costa County HCP/NCCP, NEPA/CEQA-level Biological Resources Evaluation and Wetland Determination for the 12.51-acre subject property located at 3478 Pittsburg-Antioch Highway, Pittsburg, California. If you have any questions concerning our findings or recommendations please feel free to contact me directly at: Marcus H. Bole & Associates, Attn: Marcus Bole, 104 Brock Drive, Wheatland, CA 95692, phone 530-633-0117, fax 530-633-0119, email: mbole@aol.com.

Respectfully Submitted:

Charlene J. Bole, M.S, Botanist Senior Wetland Botanist

Charles & Sole

Marcus H. Bole, M.S, Wildlife Biologist Senior Wildlife & Wetland Biologist

Maraus H. Bole

LIST OF ATTACHMENTS:

APPENDIX A: MAPS AND PHOTO PLATES

APPENDIX B: NATURAL DIVERSITY DATA BASE

APPENDIX C: SOIL DATA

APPENDIX D: WETLAND DATA SHEETS

APPENDIX E: RESUMES OF SURVEYORS

7.0 REFERENCES & LITERATURE REVIEWED

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ENCLOSURE A: SITE MAPS & PHOTOS

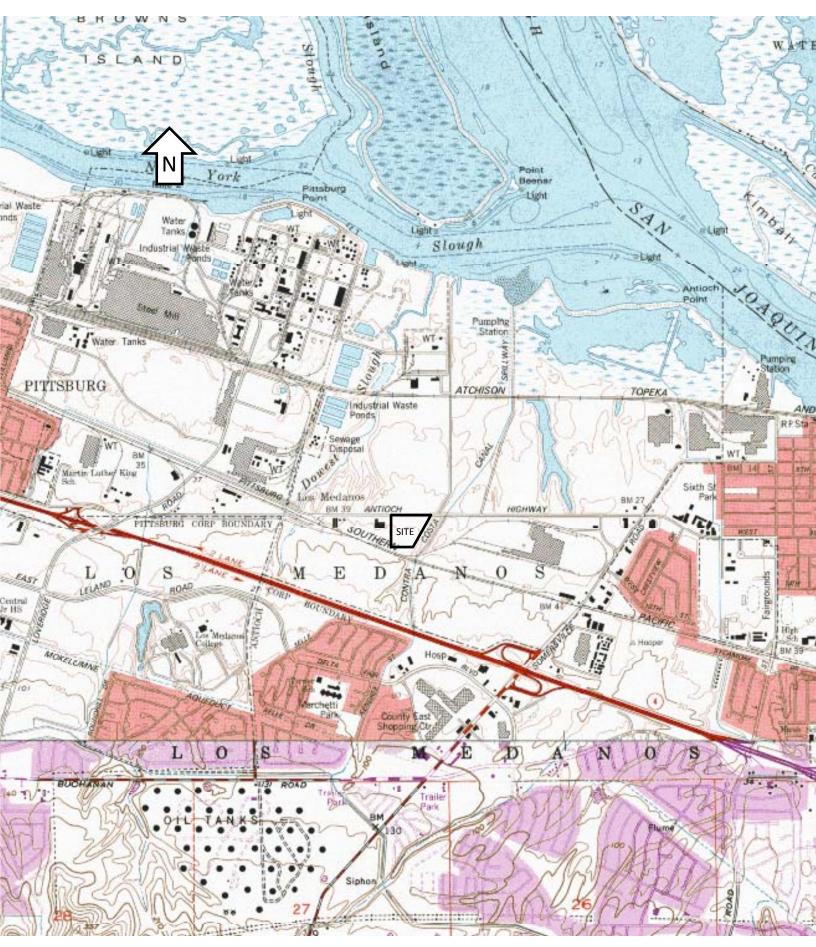
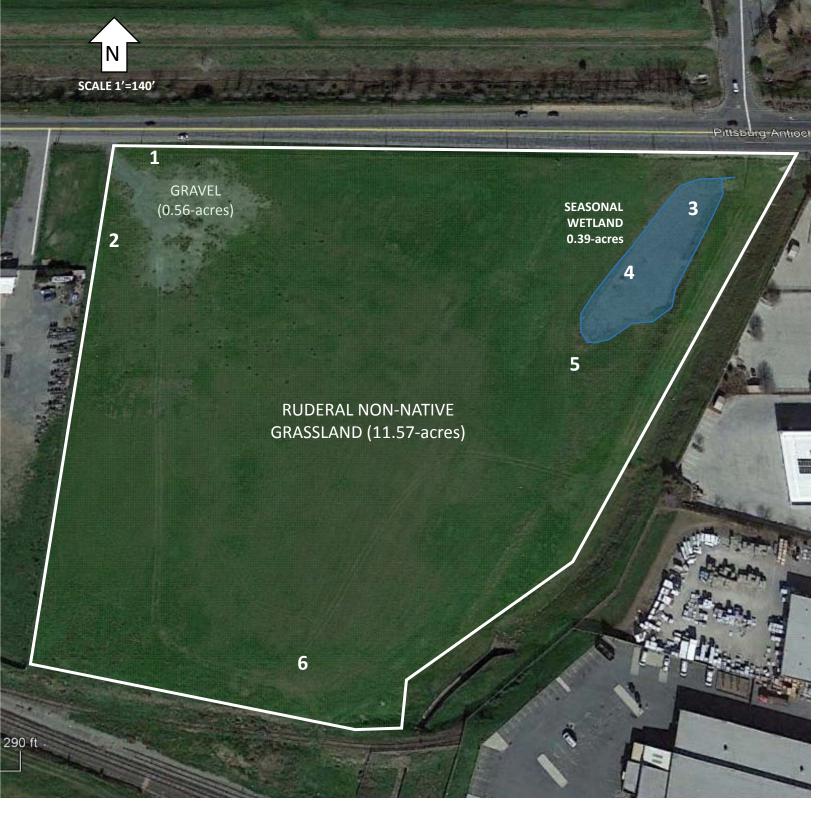


Figure 1: Vicinity Map, Solar RV/Boat and Mini-Storage Project Site, T 13 N, R 1 E, Los Medanos Land Grant, Antioch North 7.5' USGS. Contra Costa County APN 074-100-018 (12.51-acres), 3478 Pittsburg-Antioch Highway, Pittsburg, California 94565. 38.011526 North, -121.845047 West.



Aerial Photograph and Field-Verified Land Cover at the Solar RV/Boat and Mini-Storage Project Site 3478 Pittsburg-Antioch Highway, Pittsburg, California. APN 074-100-018, Survey Date: 10/8/2021.

Delineated by:

Marcus H. Bole, M.S., Senior Wetland Biologist Charlene J. Bole, M.S., Senior Wetland Botanist Marcus H. Bole & Associates 104 Brock Drive, Wheatland, CA. 95692

Email: marcus@mhbole.com

(O) 530-633-0117 (M) 916-747-8501

LEGEND

1 - 6 Wetland Data Points

Seasonal Wetland 0.39-acres

Ruderal Non-Native Grassland 11.57-acres

Gravel 0.56-acres

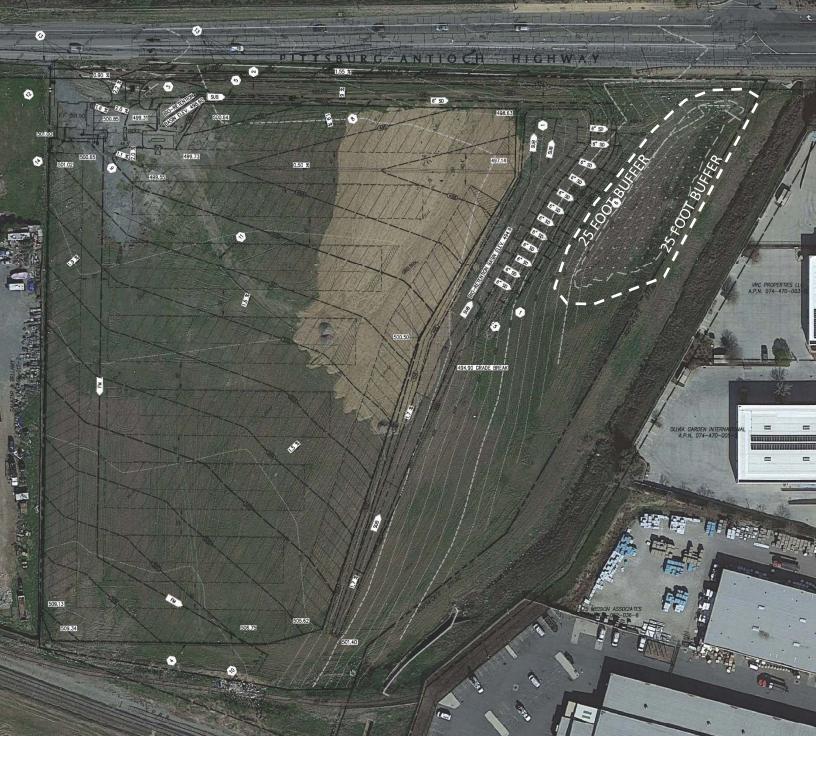


Figure 3: Project Overlay, Solar RV/Boat and Mini-Storage Project Site, T 13 N, R 1 E, Los Medanos Land Grant, Antioch North 7.5' USGS. Contra Costa County APN 074-100-018 (12.51-acres), 3478 Pittsburg-Antioch Highway, Pittsburg, California 94565. 38.011526 North, -121.845047 West. Seasonal wetland show in northeastern corner of subject property protected by 25' buffer. During construction the area will be fenced off and protected by silt fence, straw wattles, and signage. Biological monitoring will be conducted during construction.





SITE: Solar RV/Boat Mini Storage Project ITEM: Site Photos – Wetland Study Areas DATE: 9/24/2021 PLATE: 1





SITE: Solar RV/Boat Mini Storage Project

ITEM: Site Photos – Typical





SITE: Pittsburg Antioch Highway Project

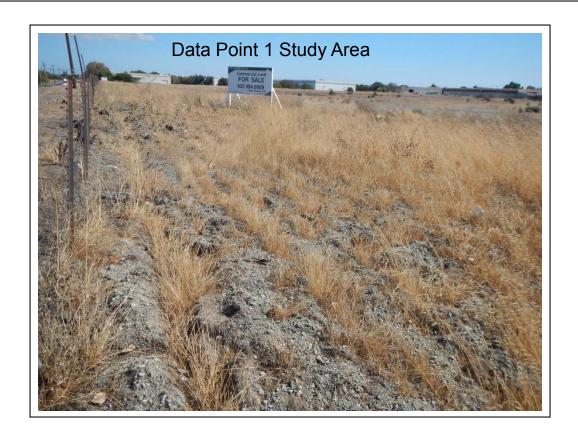
ITEM: Site Photos – Typical

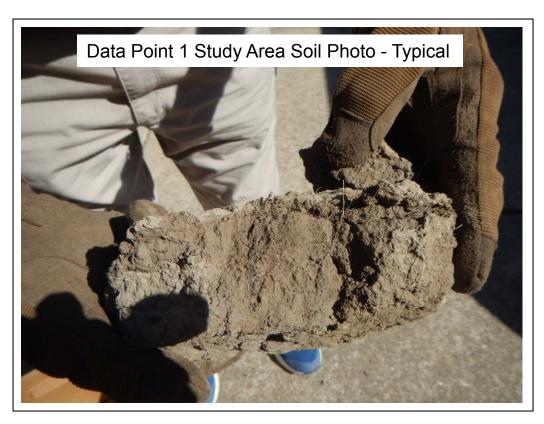




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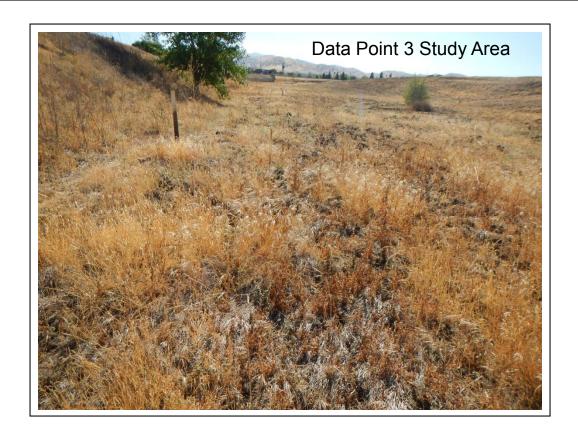
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SITE: Solar RV/Boat Mini Storage Project

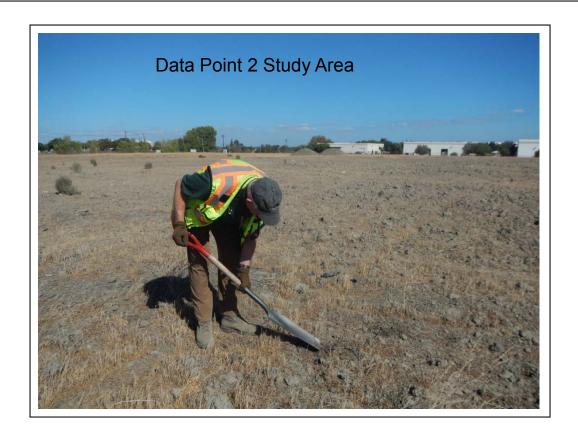
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SITE: Solar RV/Boat Mini Storage Project

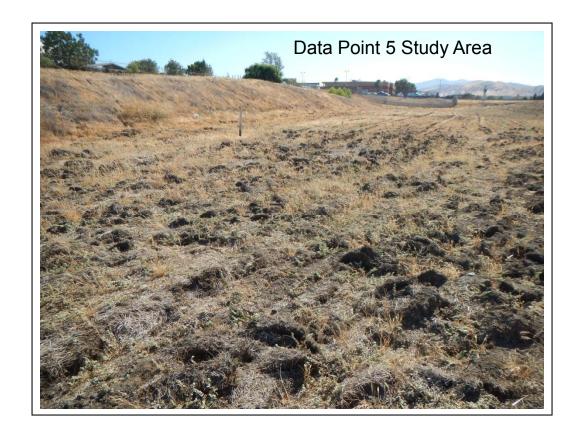
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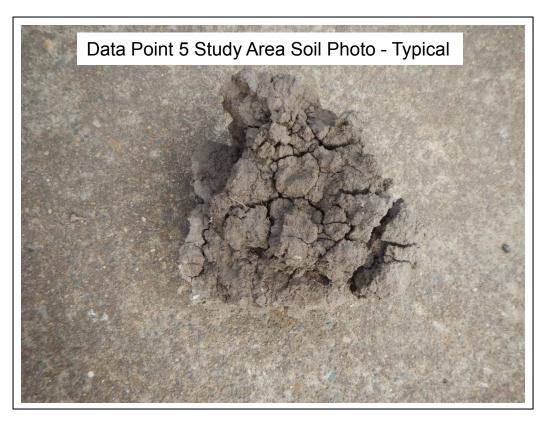




SITE: Solar RV/Boat Mini Storage Project

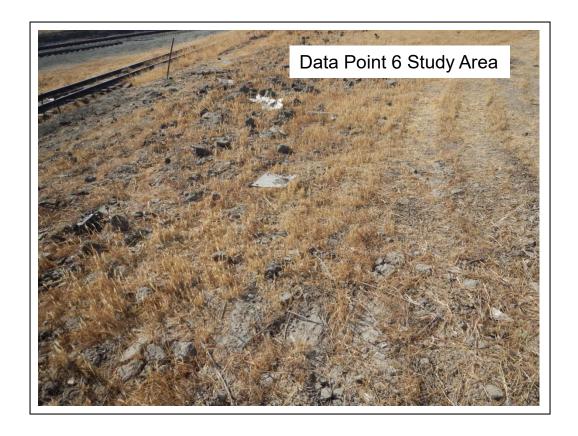
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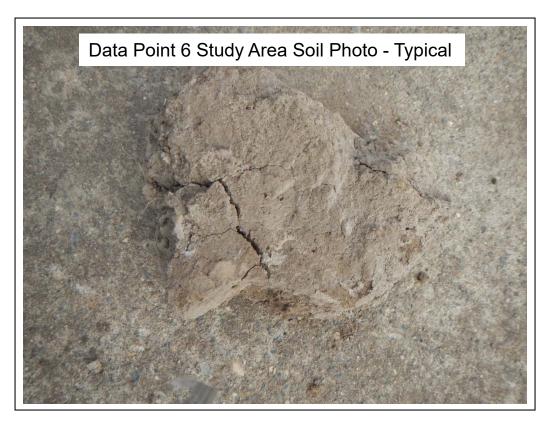




SITE: Solar RV/Boat Mini Storage Project

ITEM: Site Photos – Data Point 5





SITE: Solar RV/Boat Mini Storage Project

ITEM: Site Photos – Data Point 6

ENCLOSURE B: CNDDB & IPaC Databases



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office Federal Building 2800 Cottage Way, Room W-2605 Sacramento, CA 95825-1846 Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: October 11, 2021

Consultation Code: 08ESMF00-2022-SLI-0075

Event Code: 08ESMF00-2022-E-00223

Project Name: Solar RV/Boat and Mini-Storage Project

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan

(http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office Federal Building 2800 Cottage Way, Room W-2605 Sacramento, CA 95825-1846 (916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2022-SLI-0075

Event Code: Some(08ESMF00-2022-E-00223)

Project Name: Solar RV/Boat and Mini-Storage Project

Project Type: DEVELOPMENT

Project Description: 12.51-acre Contra Costa County APN 074-100-018, 3478 Pittsburg-

Antioch Highway, Pittsburg, CA

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.0110078,-121.84494506784802,14z



Counties: Contra Costa County, California

CTATIC

Endangered Species Act Species

Species profile: https://ecos.fws.gov/ecp/species/4482

There is a total of 20 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Salt Marsh Harvest Mouse <i>Reithrodontomys raviventris</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered
Birds	
NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Reptiles	CTATILO
NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species.	Threatened

Event Code: 08ESMF00-2022-E-00223

Amphibians

NAME STATUS

California Red-legged Frog Rana draytonii

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense

Threatened

Population: U.S.A. (Central CA DPS)

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/2076

Fishes

NAME STATUS

Delta Smelt *Hypomesus transpacificus*

Threatened

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

Species profile: https://ecos.fws.gov/ecp/species/321

Insects

NAME STATUS

Delta Green Ground Beetle Elaphrus viridis

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/2319

Lange's Metalmark Butterfly *Apodemia mormo langei*

Endangered

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/4382

Monarch Butterfly *Danaus plexippus*

Candidate

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/2246

Event Code: 08ESMF00-2022-E-00223

Flowering Plants

NAME STATUS

Antioch Dunes Evening-primrose Oenothera deltoides ssp. howellii

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5970

Colusa Grass Neostapfia colusana

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5690

Contra Costa Goldfields *Lasthenia conjugens*

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7058

Contra Costa Wallflower *Erysimum capitatum var. angustatum*

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7601

Keck's Checker-mallow Sidalcea keckii

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5704

Soft Bird's-beak Cordylanthus mollis ssp. mollis

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/8541

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME STATUS

Delta Smelt *Hypomesus transpacificus*

Final

https://ecos.fws.gov/ecp/species/321#crithab



California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria:

Quad IS (Antioch North (3812117))

| Span>(Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Delisted)

| Span>Candidate<| OR Delisted|> OR Delisted|> OR Delisted|> OR Rare<| OR Rare<| OR Rare<| OR All CNDDB element occurrences<| OR Threatened<| OR Rare<| OR

				Elev.		E	Eleme	ent O	cc. F	Ranks	5	Population	on Status		Presence	
Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Range (ft.)	Total EO's	Α	В	С	D	Х	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	G2G3 S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	50 50	1261 S:1	0	0	0	0	1	0	1	0	0	0	1
Anniella pulchra Northern California legless lizard	G3 S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	13 22	378 S:2		0	2	0	0	0	1	1	2	0	0
Anthicus antiochensis Antioch Dunes anthicid beetle	G1 S1	None None		20 20	6 S:1	0	0	0	0	1	0	1	0	0	1	0
Apodemia mormo langei Lange's metalmark butterfly	G5T1 S1	Endangered None		10 10	1 S:1	0	0	0	0	0	1	0	1	1	0	0
Archoplites interruptus Sacramento perch	G2G3 S1	None None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern	5 5	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Arizona elegans occidentalis California glossy snake	G5T2 S2	None None	CDFW_SSC-Species of Special Concern	12 12	260 S:1	0	0	0	0	0	1	1	0	1	0	0
Astragalus tener var. tener alkali milk-vetch	G2T1 S1	None None	Rare Plant Rank - 1B.2	10 10	65 S:1	0	1	0	0	0	0	0	1	1	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	1 200	2011 S:6	0	4	1	0	1	0	4	2	5	1	0
Blepharizonia plumosa big tarplant	G1G2 S1S2	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden		53 S:3		0	0	0	1	2	3	0	2	1	0
Bombus crotchii Crotch bumble bee	G3G4 S1S2	None None		50 50	437 S:1	0	0	0	0	0	1	1	0	1	0	0



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				Elev.		E	Elem	ent O	cc. F	Ranks	·	Population	on Status		Presence	
Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Range (ft.)	Total EO's	А	В	С	D	Х	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Bombus occidentalis western bumble bee	G2G3 S1	None None	USFS_S-Sensitive	25 25	306 S:1	0	0	0	0	0	1	1	0	1	0	0
Branchinecta conservatio Conservancy fairy shrimp	G2 S2	Endangered None	IUCN_EN-Endangered	10 10	53 S:1	0	0	0	0	0	1	0	1	1	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	1 15	795 S:2	0	0	0	1	0	1	1	1	2	0	0
Buteo swainsoni Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	10 10	2541 S:1	0	0	0	0	0	1	0	1	1	0	0
Chloropyron molle ssp. molle soft salty bird's-beak	G2T1 S1	Endangered Rare	Rare Plant Rank - 1B.2	10 10	27 S:1	0	0	0	0	1	0	1	0	0	1	0
Cicuta maculata var. bolanderi Bolander's water-hemlock	G5T4T5 S2?	None None	Rare Plant Rank - 2B.1	1 1	17 S:2	0	0	0	0	0	2	2	0	2	0	0
Coastal Brackish Marsh Coastal Brackish Marsh	G2 S2.1	None None			30 S:2	0	0	0	0	0	2	2	0	2	0	0
Coelus gracilis San Joaquin dune beetle	G1 S1	None None	BLM_S-Sensitive IUCN_VU-Vulnerable	10 10	11 S:1	0	0	0	0	1	0	1	0	0	0	1
Cryptantha hooveri Hoover's cryptantha	GH SH	None None	Rare Plant Rank - 1A		4 S:1	0	0	0	0	1	0	1	0	0	1	0
Downingia pusilla dwarf downingia	GU S2	None None	Rare Plant Rank - 2B.2	20 30	132 S:2		2	0	0	0	0	1	1	2	0	0
Efferia antiochi Antioch efferian robberfly	G1G2 S1S2	None None		20 20	4 S:1	0	0	0	0	0	1	1	0	1	0	0
Elanus leucurus white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	25 25	180 S:1	0	1	0	0	0	0	1	0	1	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	0 18	1398 S:3	0	2	1	0	0	0	2	1	3	0	0



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			Elev. Element Occ. Ranks Population Stat				Elev. Element Occ. Ranks			on Status		Presence	•			
Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Range (ft.)	Total EO's	Α	В	С	D	Х	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Eriogonum nudum var. psychicola	G5T1	None	Rare Plant Rank - 1B.1	17	1	0	0	0	0	0	1	1	0	1	0	0
Antioch Dunes buckwheat	S1	None		17	S:1											
Eriogonum truncatum Mt. Diablo buckwheat	G1 S1	None None	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley		7 S:1	0	0	0	0	1	0	1	0	0	1	0
Erysimum capitatum var. angustatum Contra Costa wallflower	G5T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden	10 20	4 S:4	0	0	3	0	0	1	4	0	4	0	0
Eschscholzia rhombipetala diamond-petaled California poppy	G1 S1	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley		12 S:1	0	0	0	0	1	0	1	0	0	1	0
Eucerceris ruficeps redheaded sphecid wasp	G1G3 S1S2	None None		30 30	4 S:1	0	0	0	0	0	1	1	0	1	0	0
Extriplex joaquinana San Joaquin spearscale	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden	5 5	127 S:1	0	0	1	0	0	0	1	0	1	0	0
Fritillaria liliacea fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	25 25	82 S:1	0	1	0	0	0	0	1	0	1	0	0
Geothlypis trichas sinuosa saltmarsh common yellowthroat	G5T3 S3	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	5 7	112 S:4	0	4	0	0	0	0	0	4	4	0	0
Gonidea angulata western ridged mussel	G3 S1S2	None None		30 30	157 S:1	0	0	0	0	1	0	1	0	0	1	0
Hypomesus transpacificus Delta smelt	G1 S1	Threatened Endangered	AFS_TH-Threatened IUCN_EN-Endangered	0 0	29 S:2	0	1	0	1	0	0	0	2	2	0	0



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				Elev.		Element Occ. Ranks		5	Population	on Status		Presence				
Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Range (ft.)	Total EO's	А	В	С	D	Х	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Idiostatus middlekauffi Middlekauff's shieldback katydid	G1G2 S1	None None	IUCN_CR-Critically Endangered	20 20	1 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasiurus blossevillii western red bat	G4 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	15 15	128 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasthenia conjugens Contra Costa goldfields	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	50 50	36 S:1	0	0	0	0	1	0	1	0	0	0	1
Laterallus jamaicensis coturniculus California black rail	G3G4T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	5 7	303 S:5		1	0	0	0	3	0	5	5	0	0
Lathyrus jepsonii var. jepsonii Delta tule pea	G5T2 S2	None None	Rare Plant Rank - 1B.2 SB_BerrySB-Berry Seed Bank SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden	0 10	133 S:15		3	3	0	0	9	8	7	15	0	0
Lepidurus packardi vernal pool tadpole shrimp	G4 S3S4	Endangered None	IUCN_EN-Endangered	0	329 S:1	1	0	0	0	0	0	0	1	1	0	0
Lilaeopsis masonii Mason's lilaeopsis	G2 S2	None Rare	Rare Plant Rank - 1B.1	-10 10	198 S:21	3	4	4	0	0	10	10	11	21	0	0
Limosella australis Delta mudwort	G4G5 S2	None None	Rare Plant Rank - 2B.1	0 5	59 S:7	2	2	1	1	0	1	6	1	7	0	0
Linderiella occidentalis California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	1 1	508 S:1	0	0	0	1	0	0	1	0	1	0	0
Melospiza melodia song sparrow ("Modesto" population)	G5 S3?	None None	CDFW_SSC-Species of Special Concern	30 30	92 S:1	0	0	0	0	0	1	1	0	1	0	0



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				Elev.			Elem	ent O	cc. F	Ranks	5	Population	on Status		Presence	
Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Range (ft.)	Total EO's	А	В	С	D	Х	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Melospiza melodia maxillaris Suisun song sparrow	G5T3 S3	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	5 18	36 S:6		4	0	0	0	2	2	4	6	0	0
Metapogon hurdi Hurd's metapogon robberfly	G1G2 S1S2	None None		15 15	3 S:1	0	0	0	0	1	0	1	0	0	1	0
Myrmosula pacifica Antioch multilid wasp	GH SH	None None		20 20	3 S:1	0	0	0	0	0	1	1	0	1	0	0
Oenothera deltoides ssp. howellii Antioch Dunes evening-primrose	G5T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	5 50	10 S:6		0	2	1	1	2	4	2	5	1	0
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	G5T2Q S2	Threatened None	AFS_TH-Threatened		31 S:1	0	0	0	0	0	1	0	1	1	0	0
Perdita scitula antiochensis Antioch andrenid bee	G1T1 S1	None None		20 20	2 S:1	0	0	0	0	0	1	1	0	1	0	0
Phalacrocorax auritus double-crested cormorant	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	-10 -10	39 S:1	0	0	0	0	0	1	1	0	1	0	0
Philanthus nasalis Antioch specid wasp	G1 S1	None None		20 20	4 S:1	0	0	0	0	1	0	1	0	0	0	1
Plagiobothrys hystriculus bearded popcornflower	G2 S2	None None	Rare Plant Rank - 1B.1		15 S:1	0	0	0	0	0	1	1	0	1	0	0
Reithrodontomys raviventris salt-marsh harvest mouse	G1G2 S1S2	Endangered Endangered	CDFW_FP-Fully Protected IUCN_EN-Endangered	0 5	144 S:7	0	3	2	0	0	2	1	6	7	0	0
Sidalcea keckii Keck's checkerbloom	G2 S2	Endangered None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden		50 S:1	0	0	0	0	0	1	1	0	1	0	0
Sphecodogastra antiochensis Antioch Dunes halcitid bee	G1 S1	None None		25 25	1 S:1	0	0	0	0	0	1	1	0	1	0	0



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				Elev.		E	Eleme	ent O	cc. R	anks	;	Population	on Status		Presence	
Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Range (ft.)	Total EO's	Α	В	С	D	х	U	Historic > 20 yr		Extant	Poss. Extirp.	Extirp.
Spirinchus thaleichthys longfin smelt	G5 S1	Candidate Threatened		0	46 S:3	0	0	0	0	0	3	0	3	3	0	0
Stabilized Interior Dunes Stabilized Interior Dunes	G1 S1.1	None None		20 20	2 S:1	0	0	0	0	0	1	1	0	1	0	0
Symphyotrichum lentum Suisun Marsh aster	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	0 10	175 S:24	3	3	8	0	0	10	13	11	24	0	0
Thamnophis gigas giant gartersnake	G2 S2	Threatened Threatened	IUCN_VU-Vulnerable	0 25	366 S:3	2	0	0	0	0	1	1	2	3	0	0

ENCLOSURE C: Soil Data



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Lines



Soil Map Unit Points

Special Point Features

Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry Miscellaneous Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot

Spoil Area



Stony Spot



Very Stony Spot



Wet Spot Other



Special Line Features

Water Features

Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Contra Costa County, California Survey Area Data: Version 18, Sep 9, 2021

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Apr 23, 2019—Apr 29. 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CaC	Capay clay, 1 to 15 percent slopes, MLRA 17	66.5	17.9%
RbC	Rincon clay loam, 2 to 9 percent slopes, MLRA 14	173.5	46.8%
RbD	Rincon clay loam, 9 to 15 percent slopes, MLRA 14	123.7	33.4%
So	Sycamore silty clay loam, 0 to 2 percent slopes, MLRA 17	1.7	0.5%
W	Water	5.3	1.4%
Totals for Area of Interest		370.7	100.0%

ENCLOSURE D: Wetland Data Sheets

Project/Site: Solar RV/Boat and Mini-Storage		City/C	County: Pittsb	urg/Contra Costa	Sampling D	ate: Oct 8,	2021
Applicant/Owner: Chris Koenig/Pacific Property Adv							
Investigator(s): M. Bole, C. Bole							ant
Landform (hillslope, terrace, etc.):Terrace							
Subregion (LRR): LRR – C							
Soil Map Unit Name: Rincon clay loam							
Are climatic / hydrologic conditions on the site typical for th							
Are Vegetation, Soil, or Hydrology						- V N	-
				e "Normal Circumstances"			0
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS - Attach site map				needed, explain any answ locations, transects		,	s, etc.
Hydrophytic Vegetation Present? Yes N	ıo X						
Hydric Soil Present? Yes N			Is the Sampl		V	,	
Wetland Hydrology Present? Yes N			within a Wet	land? Yes	No _X		
Remarks:							
VEGETATION – Use scientific names of plan	te						
VEGETATION — Use scientific flames of plan	Absolute	Dom	inant Indicato	Dominance Test work	rehoot:		
Tree Stratum (Plot size:)			cies? Status				
1. None				_ That Are OBL, FACW,		0	(A)
2				Total Number of Domir	nant	2	
3				Species Across All Stra		2	(B)
4				Percent of Dominant S	pecies		
Sapling/Shrub Stratum (Plot size:)		= Tota	al Cover	That Are OBL, FACW,		0	(A/B)
1. None				Prevalence Index wor	ksheet:	-	
2				Total % Cover of:	Mu	Itiply by:	_
3				OBL species	x1=_		-
4				FACW species	x 2 = _		-
5				FAC species			
Herb Stratum (Plot size: 10' x 10'		= Tota	al Cover	FACU species			
1Avena barbata	50	Υ	NI	UPL species			
2. Bromus hordeaceus	20	Y	FACU	Column Totals:	(A) _		_ (B)
3. Bromus madritensis	10	N	UPL	Prevalence Index	= B/A =		_
4Rumex crispus	5	N	FAC	Hydrophytic Vegetation	n Indicators:		
5. Lepidium latifolium	5	N	FAC	Dominance Test is	>50%		
6				Prevalence Index is			
7				Morphological Adag data in Remarks	otations1 (Prov	ide supporti	ng
8				Problematic Hydron			,
Woody Vine Stratum (Plot size:)	90	= Tota	l Cover	Problematic Hydron	Trytic vegetati	on (Explain	"
None				¹ Indicators of hydric soil	and wetland h	nvdrology m	ust
2				be present, unless distu			
		= Tota	l Cover	Hydrophytic			
% Bare Ground in Herb Stratum 10 % Cover				Vegetation	N.	Х	
Remarks:	of Biotic Cru			Present? Yes	No		
Normana.							

0	-	•			
5	L	J	ı	L	

	- 1
Sampling Point:	
Sampling Point.	_

Profile Description: (Describe to the dep	th needed to docu	ment the indicator	or confirm	n the absence of indicators.)
DepthMatrix		x Features		,
(inches) Color (moist) %	Color (moist)	% Type ¹	_Loc ²	<u>Texture</u> Remarks
O-6 10YR 3/2 100	NONE			firm, sticky very dark grayish brown
<u>6 – 12</u> <u>10YR 4/2</u> <u>100</u>	NONE			firm, blocky dark grayish brown
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS	S=Covered or Coated	Sand Gr	
Hydric Soil Indicators: (Applicable to all I				Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2)	Sandy Redo	, ,		1 cm Muck (A9) (LRR C)
Black Histic (A3)	Stripped Ma	ky Mineral (F1)		2 cm Muck (A10) (LRR B) Reduced Vertic (F18)
Hydrogen Sulfide (A4)		ed Matrix (F2)		Red Parent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Ma			Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark	Surface (F6)		
Depleted Below Dark Surface (A11)		rk Surface (F7)		NONE
Thick Dark Surface (A12)Sandy Mucky Mineral (S1)	Redox Depr	. ,		³ Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	Vernal Pools	s (F9)		wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if present):	,			diless distarbed of problematic.
Type: NONE				
Depth (inches):				Hydric Soil Present? Yes No X
Remarks:				
Soil is angular blocky, very hard,	firm. Samples	were moistene	d prior t	to soil color determination.
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of one required;	check all that apply)		Secondary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (I			Water Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust			Sediment Deposits (B2) (Riverine)
Saturation (A3)		ertebrates (B13)		Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen S	ulfide Odor (C1)		Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rh	izospheres along Liv	ing Roots	
Drift Deposits (B3) (Nonriverine)	Presence of	Reduced Iron (C4)		Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron	Reduction in Tilled S	Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Thin Muck S	, ,		Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Expla	ain in Remarks)		FAC-Neutral Test (D5)
Field Observations:	V 5			
		es):		
Water Table Present? Yes No	Z Depth (inch	es):		V
Saturation Present? Yes No (includes capillary fringe)	Depth (inch	es):	Wetlan	d Hydrology Present? Yes No X
Describe Recorded Data (stream gauge, monit	oring well, aerial ph	otos, previous inspe	ctions), if a	available:
Remarks:				
Sample taken near Pittsburg-Anti	och Highway. I	No discernable i	roadside	e ditch. Seasonal precipitation
sheet flows off road and follows of	contours along	fence line.		

Project/Site: Solar RV/Boat and Mini-Storage		City/C	County: Pittsbu	rg/Contra Costa	Sampling D	ate: Oct 8,	2021
Applicant/Owner: Chris Koenig/Pacific Property Ac	dvisors, Inc.			State: California	Sampling P	oint: 2	
Investigator(s): M. Bole, C. Bole							ant
Landform (hillslope, terrace, etc.):Terrace				-			
Subregion (LRR): LRR – C							
Soil Map Unit Name: Rincon clay loam				NWI classific			
Are climatic / hydrologic conditions on the site typical for	this time of ve	ar? Y					
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		s X N	0
Are Vegetation, Soil, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma						,	s, etc.
Hydrophytic Vegetation Present? Yes	No X		la tha Camala	1.4			
Hydric Soil Present? Yes			Is the Sampled within a Wetlan		No_X	:	
Wetland Hydrology Present? Yes	NoX		WILLIAM & WELLA	iiur 165	NO		
Remarks:							
VECETATION LIGATE ASSESSMENT OF THE	4-						
VEGETATION – Use scientific names of pla							
Tree Stratum (Plot size:)	Absolute % Cover		inant Indicator cies? Status	Dominance Test work			
1. None				Number of Dominant Sp That Are OBL, FACW, of		0	(A)
2							()
3				Total Number of Domini Species Across All Stra		2	(B)
4							(5)
				Percent of Dominant Sp That Are OBL, FACW, of		0	(A/B)
Sapling/Shrub Stratum (Plot size:)							(100)
1. None				Prevalence Index work			
2				Total % Cover of:		Iltiply by:	-
3				OBL species			_
4				FACW species			
5				FAC species			- 1
Herb Stratum (Plot size: 10' x 10'		- 1018	ai Cover	UPL species			
1. <u>Avena barbata</u>	40	Y	NI	Column Totals:			
2. Bromus hordeaceus	20	Y	FACU_				- (-)
3. Bromus madritensis	5	N_	UPL	Prevalence Index			
4. Centaurea solstitalis	5	N_	<u>NI</u>	Hydrophytic Vegetation			
5				Dominance Test is			
6				Prevalence Index is			
7				Morphological Adap data in Remarks	or on a separ	ide supporti ate sheet)	ng
8	70			Problematic Hydrop			1)
Woody Vine Stratum (Plot size:)		= Tota	l Cover	_ , ,		, ,	´
1. None				¹ Indicators of hydric soil	and wetland h	nydrology m	ust
2				be present, unless distur	bed or proble	matic.	
		= Tota	l Cover	Hydrophytic			
% Bare Ground in Herb Stratum30 % Cove	er of Biotic Cru	ıct		Vegetation	No	Χ	
Remarks:	יי טוטוני טונ			Present? Yes	NO		
Melians.							

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Samuumu	POIIII.	_

Profile Description: (Describe to t	he depth needed to docum	ment the indicator	or confirm	the absence	of indicators.)
Depth Matrix	Redo	x Features			,
(inches) Color (moist)	% Color (moist)	% Type ¹	_Loc ²	Texture	Remarks
<u>0 – 6</u> <u>10YR 4/2</u> 1	100 NONE			firm, block	xy dark grayish brown
<u>6 – 12</u> 10YR 3/2	100 NONE			blocky	very dark grayish brown
1-					
¹ Type: C=Concentration, D=Depletio	n, RM=Reduced Matrix, CS	=Covered or Coated	Sand Gra		ation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable					or Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redo	, ,			uck (A9) (LRR C)
Histic Epipedon (A2) Black Histic (A3)	Stripped Ma				uck (A10) (LRR B)
Hydrogen Sulfide (A4)		ky Mineral (F1)			d Vertic (F18)
Stratified Layers (A5) (LRR C)	Depleted Ma	ed Matrix (F2)			rent Material (TF2)
1 cm Muck (A9) (LRR D)	Redox Dark	, ,		Other (E	Explain in Remarks)
Depleted Below Dark Surface (A		rk Surface (F7)			
Thick Dark Surface (A12)	Redox Depre			3Indicators o	f hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools	(F9)			ydrology must be present,
Sandy Gleyed Matrix (S4)				unless dis	turbed or problematic.
Restrictive Layer (if present):					
Type: NONE					
Depth (inches):				Hydric Soil P	resent? Yes No X
Remarks:		_			
Soil is angular blocky. Sam	ples were moistened	prior to soil co	lor deter	mination.	
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one re				Seconda	ary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (E			Wat	ter Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust			Sed	iment Deposits (B2) (Riverine)
Saturation (A3)		rtebrates (B13)		-	Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)		ulfide Odor (C1)			nage Patterns (B10)
Sediment Deposits (B2) (Nonriver		izospheres along Liv	ing Roots		Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)		Reduced Iron (C4)			fish Burrows (C8)
Surface Soil Cracks (B6)		Reduction in Tilled S	oils (C6)		ration Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Image	, , ,				llow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Expla	in in Remarks)		FAC	-Neutral Test (D5)
Field Observations:	V				
	No X Depth (inch				
Water Table Present? Yes	No X Depth (inche	es):			
Saturation Present? Yes	No X Depth (inche	es):	Wetland	Hydrology P	resent? Yes No X
(includes capillary fringe) Describe Recorded Data (stream gauge			tions\ if	vailable:	
January Data (Stream gauge	,ormornig wen, aenai pric	otos, previous irispet	aons), ii a	valiable.	
Pomorko:					
Remarks:	inland habitat Fidela	nee of cut 0 fill	matari-	la soma = =	enhalt
Sample taken in disturbed u	•				priait.
Sample taken approximatel	y 125 feet south of Pi	ittsburg-Antioch	n Highwa	ay.	

Project/Site: Solar RV/Boat and Mini-Storage		City/C	County: Pittsbu	rg/Contra Costa Sampling Date: Oct 8, 2021
Applicant/Owner: Chris Koenig/Pacific Property Ad	visors, Inc.			State: California Sampling Point: 3
Investigator(s): M. Bole, C. Bole				
				, convex, none):none Slope (%): 1-2%
				Long: -121.84330W Datum: NAD 83
Soil Map Unit Name: Rincon clay loam				NWI classification:non-hydric
Are climatic / hydrologic conditions on the site typical for t	his time of ye	ear? Y		
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" present? Yes _X No
Are Vegetation, Soil, or Hydrology				eeded, explain any answers in Remarks.)
				locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X	No			
Hydric Soil Present? Yes X			Is the Sample	
Wetland Hydrology Present? Yes X			within a Wetla	nd? Yes X No
Remarks:				
VEGETATION – Use scientific names of pla	nts.			
Tree Stratum (Plot size:)	Absolute % Cover		inant Indicator cies? Status	Dominance Test worksheet:
1. None				Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2				That Ale OBL, FACTO, OF FAC. (A)
3				Total Number of Dominant 5
4				Species Across All Strata: (B)
				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		100	ar 00vc1	That Are OBL, FACW, or FAC:(A/B)
1. None				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =
5				FAC species x 3 =
Herb Stratum (Plot size: 10' x 10'		= Tota	al Cover	FACU species x 4 =
1. Polypogon monspeliensis	20	٧	FACW	UPL species x 5 =
Lepidium latifolium	20		FAC	Column Totals: (A) (B)
3. Rumex crispus	20		FAC	Prevalence Index = B/A =
4. Phalaris parodoxa	15	Y	FAC	Hydrophytic Vegetation Indicators:
5Avena barbata	10	<u>·</u>	NI NI	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)
	85	= Tota	l Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				
1. None				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2				be present, driess disturbed of problematic.
		= Tota	l Cover	Hydrophytic Vegetation
% Bare Ground in Herb Stratum15	r of Biotic Cru	ust		Present? Yes X No
Remarks:				
				1

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Sampling I	Point.	

(inches)	Matrix	%		Features		. 2			
0 – 6	Color (moist) 10YR 2/2	100	7.5YR 6/8	<u>%</u> 5	Type ¹	Loc ²	<u>Texture</u> firm, blocky	very dark browr	
		-	NONE						
6-12	10YR 3/2		NONE				blocky	very dark grayis	n brown
¹Type: C=Co	ncentration, D=Deple	otion PM-D	aduand Matrix CS-	Cauarad		4 0004 0		tion Die Donation I	
Hydric Soil Ir	ndicators: (Applica	ble to all LF	RRs, unless otherw	ise note	d.)	o Sano G		tion: PL=Pore Lining, Nor Problematic Hydric	
Histosol (Sandy Redox		,			ick (A9) (LRR C)	
Histic Epi	pedon (A2)		Stripped Matri					ick (A10) (LRR B)	
Black His	tic (A3)		Loamy Mucky	Mineral	(F1)			Vertic (F18)	
Hydrogen	Sulfide (A4)		Loamy Gleyed	Matrix (F2)			ent Material (TF2)	
	Layers (A5) (LRR C))	Depleted Matr	ix (F3)			X Other (E	xplain in Remarks)	
	k (A9) (LRR D)		Redox Dark S		,				
	Below Dark Surface	(A11)	Depleted Dark						
	k Surface (A12)		Redox Depres		3)			hydrophytic vegetation	
	icky Mineral (S1)		Vernal Pools (F9)				drology must be presen	t,
	eyed Matrix (S4) eyer (if present):						unless dist	urbed or problematic.	
Type: NO									
Depth (inch			_					V	
Remarks:	les)		_				Hydric Soil Pi	resent? Yes X	No
			soil color deter	minaci	•				
Wetland Hydro	ology Indicators:	required; el					0		
Vetland Hydro Primary Indicat	ology Indicators: tors (minimum of one	e required; ch	neck all that apply)					ry Indicators (2 or more	
Vetland Hydro Primary Indicat Surface W	ology Indicators: fors (minimum of one fater (A1)	e required; ch	neck all that apply)	1)			Wate	er Marks (B1) (Riverine)
Vetland Hydro Primary Indicat Surface W High Wate	ology Indicators: tors (minimum of one fater (A1) r Table (A2)	e required; ch	neck all that apply) Salt Crust (B1 Biotic Crust (E	1)			Wate	er Marks (B1) (Riverine ment Deposits (B2) (Riv) verine)
Vetland Hydro Primary Indicat Surface W High Wate Saturation	ology Indicators: tors (minimum of one later (A1) r Table (A2) (A3)		neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert	1) 312) ebrates (B13)		Wate Sedi Drift	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine) verine)
Vetland Hydro Primary Indicat Surface W High Wate Saturation Water Mark	ology Indicators: tors (minimum of one later (A1) r Table (A2) (A3) ks (B1) (Nonriverine	e)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul	1) 312) ebrates (B13)		Wate Sedi Drift Drain	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10)) verine) e)
Vetland Hydro Primary Indicat Surface W High Wate Saturation Water Marl Sediment [ology Indicators: lors (minimum of one later (A1) r Table (A2) (A3) ks (B1) (Nonrivering Deposits (B2) (Nonri	e) iverine)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult	1) 312) ebrates (fide Odor	B13) (C1) along Liv	ving Root	Wate Sedi Drift X Drain s (C3) Dry-	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10) Season Water Table (C2) verine) e)
Wetland Hydro Primary Indicat Surface W High Wate Saturation Water Mark Sediment I Drift Depos	ology Indicators: ors (minimum of one later (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonriverine sits (B3) (Nonriverine	e) iverine)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R	1) 312) ebrates (fide Odor ospheres	B13) (C1) s along Liv ron (C4)		Wate Sedi Drift X Drain s (C3) Dry-3 Cray	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10) Season Water Table (C2 fish Burrows (C8)	yerine) e)
Vetland Hydro Primary Indicat Surface W High Wate Saturation Water Mark Sediment I Drift Depos Surface So	ology Indicators: tors (minimum of one fater (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonriverine sits (B3) (Nonriverine oil Cracks (B6)	e) iverine) e)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R	1) 812) ebrates (fide Odor ospheres deduced eduction	B13) (C1) s along Livron (C4) in Tilled \$		Wate Sedi Drift Drain s (C3) Dry-3 Cray Satu	er Marks (B1) (Riverine) ment Deposits (B2) (Riv Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial I	yerine) e)
Vetland Hydro Primary Indicat Surface W High Wate Saturation Water Mari Sediment I Drift Depos Surface So Inundation	ology Indicators: tors (minimum of one fater (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonri sits (B3) (Nonriverin il Cracks (B6) Visible on Aerial Ima	e) iverine) e)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R: Thin Muck Sul	1) 812) ebrates (fide Odor ospheres leduced eduction fface (C7	B13) (C1) s along Livron (C4) in Tilled \$		Wate Sedi Drift Drain Cray Cray Satu Shall	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10) Season Water Table (C2 fish Burrows (C8) ration Visible on Aerial I low Aquitard (D3)	yerine)
Wetland Hydro Primary Indicat Surface W High Wate Saturation Water Marl Sediment I Drift Depos Surface So Inundation Water-Stain	ology Indicators: tors (minimum of one fater (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonri sits (B3) (Nonriverin il Cracks (B6) Visible on Aerial Ima ned Leaves (B9)	e) iverine) e)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R	1) 812) ebrates (fide Odor ospheres leduced eduction fface (C7	B13) (C1) s along Livron (C4) in Tilled \$		Wate Sedi Drift Drain Cray Cray Satu Shall	er Marks (B1) (Riverine) ment Deposits (B2) (Riv Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial I	yerine)
Primary Indicat Surface W High Wate Saturation Water Mari Sediment [Drift Depos Surface So Inundation Water-Stain	cology Indicators: cors (minimum of one dater (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonriverine dit Cracks (B6) Visible on Aerial Image and Leaves (B9) tions:	e) iverine) ne) agery (B7)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain	1) 812) ebrates (fide Odor ospheres deduced l eduction rface (C7)	B13) (C1) s along Livron (C4) in Tilled S)	Soils (C6)	Wate Sedi Drift Drain Cray Cray Satu Shall	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10) Season Water Table (C2 fish Burrows (C8) ration Visible on Aerial I low Aquitard (D3)	yerine) e)
Primary Indicat Surface W High Wate Saturation Water Mark Sediment I Drift Depose Surface So Inundation Water-Stain ield Observat	cology Indicators: cors (minimum of one later (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonriverine bil Cracks (B6) Visible on Aerial Ima ned Leaves (B9) tions: Present? Yes	e) iverine) ie) agery (B7)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain	1) B12) ebrates (fide Odol ospheres educed l eduction rface (C7	B13) (C1) s along Livron (C4) in Tilled S) arks)	Soils (C6)	Wate Sedi Drift Drain Cray Cray Satu Shall	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10) Season Water Table (C2 fish Burrows (C8) ration Visible on Aerial I low Aquitard (D3)	yerine)
Primary Indicat Surface W High Wate Saturation Water Mark Sediment I Drift Depos Surface So Inundation Water-Stain ield Observat	cology Indicators: cors (minimum of one cater (A1) r Table (A2) (A3) ks (B1) (Nonriverine copposits (B2) (Nonriverine color (B3) (Nonriverine color (B6) Visible on Aerial Ima cond Leaves (B9) tions: Present? Yes esent? Yes	e) iverine) ie) agery (B7)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain X Depth (inches	1) 312) ebrates (fide Odor ospheres eduction fface (C7 in Rema	B13) c (C1) c along Liv ron (C4) in Tilled S) urks)	Soils (C6)	Wate Sedi Drift X Drain s (C3) Dry-3 Cray X Satu Shall FAC-	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10) Season Water Table (C2 fish Burrows (C8) ration Visible on Aerial I low Aquitard (D3)	yerine) (e) (2) magery (C9)
Primary Indicat Surface W High Wate Saturation Water Mark Sediment I Drift Depos Surface So Inundation Water-Stain ield Observat Vater Table Presaturation Presi	cology Indicators: cors (minimum of one cater (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonriverine color (A3) Visible on Aerial Ima ned Leaves (B9) Visions: Present? Yes esent? Yes ent? Yes	e) iverine) ie) agery (B7)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain	1) 312) ebrates (fide Odor ospheres eduction fface (C7 in Rema	B13) c (C1) c along Liv ron (C4) in Tilled S) urks)	Soils (C6)	Wate Sedi Drift X Drain s (C3) Dry-3 Cray X Satu Shall FAC-	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10) Season Water Table (C2 fish Burrows (C8) ration Visible on Aerial I low Aquitard (D3)	yerine) (e) (2) magery (C9)
Primary Indicat Surface W High Wate Saturation Water Mark Sediment I Drift Depos Surface So Inundation Water-Stain ield Observat furface Water I Water Table Presencludes capilla	cology Indicators: cors (minimum of one cater (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonriverine color (A3) Visible on Aerial Ima ned Leaves (B9) Visions: Present? Yes esent? Yes ent? Yes	e) iverine) ie) agery (B7)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain X Depth (inches X Depth (inches	1) 312) ebrates (fide Odor ospheres eduction fface (C7 in Rema	B13) c (C1) c along Liv ron (C4) in Tilled \$) urks)	Soils (C6)	Wate Sedi Drift Drain s (C3) Dry-3 Cray Satu Shall FAC-	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10) Season Water Table (C2 fish Burrows (C8) ration Visible on Aerial I low Aquitard (D3)	yerine) (e) (2) magery (C9)
Primary Indicat Surface W High Water Saturation Water Mari Sediment I Drift Depose Surface So Inundation Water-Stain Field Observate Surface Water I Surface	cology Indicators: cors (minimum of one cater (A1) r Table (A2) (A3) ks (B1) (Nonriverine copposits (B2) (Nonriverine color (B3) (Nonriverine color (B6) Visible on Aerial Ima cond Leaves (B9) tions: Present? Yes esent? Yes ent? Yes ent? Yes ent? Yes ent? Yes ent? Yes ent? Yes	e) iverine) ie) agery (B7)	neck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain X Depth (inches X Depth (inches	1) 312) ebrates (fide Odor ospheres eduction fface (C7 in Rema	B13) c (C1) c along Liv ron (C4) in Tilled \$) urks)	Soils (C6)	Wate Sedi Drift Drain s (C3) Dry-3 Cray Satu Shall FAC-	er Marks (B1) (Riverine ment Deposits (B2) (Riv Deposits (B3) (Riverine nage Patterns (B10) Season Water Table (C2 fish Burrows (C8) ration Visible on Aerial I low Aquitard (D3)	yerine) (e) (2) magery (C9)
Wetland Hydro Primary Indicat Surface W High Wate Saturation Water Mari Sediment I Drift Depos Surface So Inundation Water-Stain ield Observat surface Water I Water Table Pres aturation Pres includes capilla escribe Record	ology Indicators: tors (minimum of one fater (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonriverine Sits (B3) (Nonriverine Sits (B3) (Nonriverine Sits (B4) (Nonriverin	e) (verine) (ve) (ve) (ve) (ve) (ve) (ve) (ve) (v	Salt Crust (B1 Biotic Crust (E1 Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain X Depth (inches X Depth (inches	1) 812) ebrates (fide Odor ospheres educed eduction rface (C7 in Rema	B13) (C1) s along Liv ron (C4) in Tilled S) urks)	Wetlar	Wate Sedi Drift Drain s (C3) Dry-3 Cray Satu Shall FAC-	er Marks (B1) (Riverine ment Deposits (B2) (Riverine Deposits (B3) (Riverine Deposits (B10) (Riverine Deposits (B2) (Riverine Deposi	yerine) (e) (2) magery (C9)
Primary Indicat Surface W High Wate Saturation Water Mark Sediment I Drift Depose Surface So Inundation Water-Stain ield Observat furface Water I Water Table Presenctudes capillates cribe Record	cology Indicators: cors (minimum of one clater (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonriverine clater (B3) (Nonriverine clater (B6) Visible on Aerial Ima ned Leaves (B9) tions: Present? Yes esent? Yes ent?	e) iverine) ie) agery (B7)	Salt Crust (B1 Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain X Depth (inches X Depth (inches X Depth (inches X Depth (inches	1) 312) ebrates (fide Odor ospheres leduced leduction rface (C7 in Rema	B13) (C1) salong Liveron (C4) in Tilled S) arks) ous inspections	Wetlan	Wate Sedi Drift Drain s (C3) Dry-3 Cray Shall Shall FAC- available:	er Marks (B1) (Riverine ment Deposits (B2) (Riverine Deposits (B3) (Riverine Deposits (B10) (Riverine Deposits (B2) (Riverine Deposi	yerine) (e) (2) magery (C9)
Primary Indicat Surface W High Wate Saturation Water Mark Sediment I Drift Depos Surface So Inundation Water-Stain ield Observat Furface Water F Vater Table Presenctudes capilla escribe Record emarks: Sample ta portion of	cology Indicators: cors (minimum of one cater (A1) r Table (A2) (A3) ks (B1) (Nonriverine cologoposits (B2) (Nonriverine cologoposits (B3) (Nonriverine cologoposits (B6) Visible on Aerial Ima cologoposits (B9) cologoposits (B1) cologoposits (B1) cologoposits (B1) cologoposits (B1) cologoposits (B2) (Nonriverine cologoposits (B2) (Nonriver	e) iverine) ie) agery (B7)	Salt Crust (B1 Biotic Crust (E1 Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain X Depth (inches X Depth (inches X Depth (inches X Area is a depres S significantly lo	1) 312) ebrates (fide Odor ospheres deduction rface (C7 in Rema	B13) (C1) s along Livron (C4) in Tilled S) arks) ous inspe	Wetlan	Wate Sedi Drift Sedi Prift Cray Satu Shall FAC available:	er Marks (B1) (Riverine ment Deposits (B2) (Riverine Deposits (B3) (Riverine Deposits (B10) (Riverine Deposits (B2) (Riverine Deposi	yerine) (e) (2) magery (C9)
Vetland Hydro Primary Indicat Surface W High Wate Saturation Water Mark Sediment I Drift Depose Surface So Inundation Water-Stain ield Observate Vater Table Presenctudes capillate escribe Record emarks: Sample ta portion of	cology Indicators: cors (minimum of one clater (A1) r Table (A2) (A3) ks (B1) (Nonriverine Deposits (B2) (Nonriverine clater (B3) (Nonriverine clater (B6) Visible on Aerial Ima ned Leaves (B9) tions: Present? Yes esent? Yes ent?	e) iverine) ie) agery (B7)	Salt Crust (B1 Biotic Crust (E1 Aquatic Invert Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Sult Other (Explain X Depth (inches X Depth (inches X Depth (inches X Area is a depres S significantly lo	1) 312) ebrates (fide Odor ospheres deduction rface (C7 in Rema	B13) (C1) s along Livron (C4) in Tilled S) arks) ous inspe	Wetlan	Wate Sedi Drift Sedi Prift Cray Satu Shall FAC available:	er Marks (B1) (Riverine ment Deposits (B2) (Riverine Deposits (B3) (Riverine Deposits (B10) (Riverine Deposits (B2) (Riverine Deposi	yerine) (e) (2) magery (C9)

Project/Site: Solar RV/Boat and Mini-Storage		City/C	County: P	Pittsbur	g/Contra Costa	Sampling [Date: Oct 8	, 2021
Applicant/Owner: Chris Koenig/Pacific Property Advis			-					
Investigator(s): M. Bole, C. Bole								ant
Landform (hillslope, terrace, etc.):Terrace								
Subregion (LRR): LRR – C								
Soil Map Unit Name: Rincon clay loam								
Are climatic / hydrologic conditions on the site typical for this							Tiyane	
Are Vegetation, Soil, or Hydrology signal					Normal Circumstances			10
Are Vegetation, Soil, or Hydrology na SUMMARY OF FINDINGS – Attach site map s	-				eded, explain any ans		,	e etc
		- Juii	ipiiiig k				- reature	.5, 010.
Hydrophytic Vegetation Present? Yes X No			Is the S	Sampled	Area			
Hydric Soil Present? Yes X No			within a	a Wetlan	d? Yes	X No_		
Wetland Hydrology Present? Yes X No Remarks:								
Nemarks.								
,								
VEGETATION – Use scientific names of plants	s.							
	Absolute		inant Ind		Dominance Test wo	rksheet:		
	% Cover				Number of Dominant		4	(4)
1. <u>Salix laevigata</u>				CW_	That Are OBL, FACV	, or FAC:	·	(A)
2 3					Total Number of Dom		4	(D)
4					Species Across All St	rata:		(B)
		= Tota	al Cover		Percent of Dominant		100	(A/D)
Sapling/Shrub Stratum (Plot size:)					That Are OBL, FACW	, or FAC		(A/B)
1. None					Prevalence Index we	orksheet:		
2					Total % Cover of			
3					OBL species			
4					FACW species			- 1
5					FAC species			
Herb Stratum (Plot size: 10' x 10'		= 1018	al Cover	- 1	UPL species			
1. Polypogon monspeliensis	20	Y	FA	^ C\A/	Column Totals:			
2. Lepidium latifolium	20	Y	FA	AC		()		_ ()
3. Rumex crispus		Υ	F/	AC	Prevalence Inde			
4. Phalaris parodoxa	<u>25</u>	<u>Y</u>			Hydrophytic Vegetat		:	
5. Schoenoplectus acutus		N	OF	BL .	Dominance Test i			
6				— I ·	Prevalence Index			.
7					Morphological Ad data in Remark	aptations" (Pro ks or on a sepa	vide support irate sheet)	ing
8	90	~ .			Problematic Hydro			n)
Woody Vine Stratum (Plot size:)		= Tota	I Cover					
1. None					Indicators of hydric so			ust
2					be present, unless dis	lurbed or proble	ematic.	
-	=	Total	l Cover		Hydrophytic			
% Bare Ground in Herb Stratum5	Biotic Cru	ıst			Vegetation Present? Yo	es_XNo	0	
Remarks:								

0	-	•			
5	L	J	ı	L	

Sampling	Point:	4
Samulaniu	F UII IL.	

Depth	ription: (Describe Matrix		Redox	x Features		or confirm	n the absence o	of indicators.)		
(inches)	Color (moist)	%	Color (moist)		Type ¹	_Loc ²	Texture		Remarks	
0-6	10YR 2/2	100	7.5YR 6/8	5			firm, blocky	very dark		
6-12	10YR 2/2	100	7.5YR 6/8				blocky -	very dark	brown	
¹Type: C=Cor	ncentration, D=Depl	etion, RM=Re	educed Matrix, CS	=Covered	or Coated	d Sand Gr		tion: PL=Pore		
Histosol (ndicators: (Applica	ible to all LR			a.)			or Problematic		oils":
The second secon	pedon (A2)		Sandy Redox Stripped Mat					ck (A9) (LRR C		
Black Hist			Loamy Muck		(F1)			ck (A10) (LRR I Vertic (F18)	В)	
	Sulfide (A4)		Loamy Gleye	-				ent Material (TF	F2)	
	Layers (A5) (LRR C)	Depleted Mar					xplain in Rema		
1 cm Muc	k (A9) (LRR D)		Redox Dark	Surface (F	6)				,	
	Below Dark Surface	(A11)	Depleted Dar		. ,					
	k Surface (A12)		Redox Depre		8)			hydrophytic ve		
	icky Mineral (S1) eyed Matrix (S4)		Vernal Pools	(F9)			-	drology must b		
	ayer (if present):						unless dist	urbed or proble	matic.	
Type: NO										
			-						V	
Depth (inch Remarks:	les)						Hydric Soil Pr	esent? Yes	<u>X</u>	No
	were moistene	- I								
YDROLOG	Y ology Indicators:				-					
	tors (minimum of one	a required: ch	ack all that apply)				Cd-	I- dit (O		
Surface W		e required, cri		44)				ry Indicators (2		equirea)
	r Table (A2)		Salt Crust (B Biotic Crust (,				er Marks (B1) (I		
_ Saturation			Aquatic Inver		(D12)			ment Deposits	. , .	,
	ks (B1) (Nonriverin	e)	Hydrogen Su		,			Deposits (B3) (
	Deposits (B2) (Nonr		Oxidized Rhi			vina Roots		nage Patterns (Season Water ⁻		
	sits (B3) (Nonriverin		Presence of i		_	ring reoots		fish Burrows (C		
	oil Cracks (B6)	,	Recent Iron F		, ,	Soils (C6)		ration Visible or		agery (C9)
Inundation	Visible on Aerial Ima	agery (B7)	Thin Muck Su			(00)		ow Aquitard (D		lagory (ou)
_ Water-Stair	ned Leaves (B9)		Other (Explai					Neutral Test (E		
ield Observat	tions:					1				
Surface Water F	Present? Yes	No _	X Depth (inche	es):						
Vater Table Pre		No _								
aturation Dres	ent? Yes	No _	X Depth (inche	es):		1	d Hydrology Pr	esent? Yes	_X	No
aturation Presenctudes capilla	ary tringe)					4				
ncludes capilla	ded Data (stream ga	auge, monitor	ing well, aerial pho	tos, previ	ous inspe	ctions), if a	available:			
ncludes capilla escribe Record	ary fringe) ded Data (stream ga	auge, monitor	ing well, aerial pho	otos, previ	ous inspe	ctions), if a	available:			
ncludes capilla lescribe Record emarks:	ded Data (stream ga							northeaste	arn	
ncludes capilla describe Record emarks: Sample ta	ded Data (stream ga ken in seasona	l wetland.	Area is a depr	ression	within a	a broad	swale in the			
ncludes capilla escribe Record emarks: Sample ta portion of	ken in seasona	l wetland. Γhe area is	Area is a depo	ression ower in	within a	a broad on from	swale in the			
ncludes capilla escribe Record emarks: Sample ta portion of	ded Data (stream ga ken in seasona	l wetland. Γhe area is	Area is a depo	ression ower in	within a	a broad on from	swale in the			

Project/Site: Solar RV/Boat and Mini-Storage		City/Cou	_{inty:} Pittsbu	rg/Contra Costa	Sampling Date: Oct 8, 2021
Applicant/Owner: Chris Koenig/Pacific Property Advisors	s, Inc.			State: California	Sampling Point: 5
Investigator(s): M. Bole, C. Bole		Section,	Township, Ra	ange: T 13 N, R 1 E, Lo	s Medanos Land Grant
Landform (hillslope, terrace, etc.):Terrace		Local re	lief (concave,	convex, none):none	Slope (%): 1-2%
Subregion (LRR): LRR – C	at: <u>38</u> .	.01151	N	Long:121.84393W	Datum: NAD 83
Soil Map Unit Name: Rincon clay loam				NWI classifica	ation: _ non-hydric
Are climatic / hydrologic conditions on the site typical for this time	e of year	ar? Yes			
Are Vegetation, Soil, or Hydrology signifi					resent? Yes X No
Are Vegetation, Soil, or Hydrology natura	ally pro	blematic	? (If ne	eeded, explain any answers	s in Remarks.)
SUMMARY OF FINDINGS - Attach site map sho	wing	sampl	ing point l	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes No	X				2
Hydric Soil Present? Yes No		- 1	the Sampled		No_X
Wetland Hydrology Present? Yes No	<u>X</u>	W	ithin a wetiai	nd? Yes	NO
Remarks:					
VEGETATION – Use scientific names of plants.					
	olute		nt Indicator	Dominance Test works	heet:
<u>Tree Stratum</u> (Plot size:) % (? Status	Number of Dominant Spe That Are OBL, FACW, or	
2					
3				Total Number of Dominar Species Across All Strata	/
4					` '
Conline (Charles Charles (Distained		= Total C	Cover	Percent of Dominant Spe That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size:) 1 None				Prevalence Index works	choot:
1. <u>None</u> 2					Multiply by:
3				OBL species	
4				FACW species	
5				FAC species	x 3 =
Herb Stratum (Plot size: 10' x 10'		= Total C	over	FACU species	
	0	Υ	NI	UPL species	
	0	Υ		Column Totals:	(A) (B)
	.5	N	UPL	Prevalence Index =	B/A =
4. Centaurea solstitalis 1	5	N	NI	Hydrophytic Vegetation	Indicators:
5				Dominance Test is >5	
6				Prevalence Index is ≤	
7					ations ¹ (Provide supporting or on a separate sheet)
8	- 0	= Total C	01/05	Problematic Hydrophy	ytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)		- Total C	over		
1. None				¹ Indicators of hydric soil ar be present, unless disturbe	nd wetland hydrology must
2					ed of problematic.
		Total C		Hydrophytic Vegetation	
% Bare Ground in Herb Stratum10	tic Cru	st		Present? Yes _	No _X
Remarks:					

-	-	•	٠		
c	r	٦			
J	٩.	.,	п	ь	_

Sampling	Doint.	כ
Samulinu	POIIII.	_

Profile Descr	iption: (Describe	to the depti	needed to docu	ment the indicator	or confirm	n the absence	of indicators.)
Depth	Matrix			x Features			•
(inches)	Color (moist)	%	Color (moist)	% Type ¹	_Loc ²	Texture	Remarks
0-6	10YR 4/2	100	NONE			firm, block	ky dark grayish brown
6-12	10YR 3/2	100	NONE			blocky	very dark grayish brown
¹Type: C=Con	acontration D=Dani	otion DM-D	laduard Matrix OC			. 2.	
Hydric Soil Inc	dicators: (Applica	the to all I	RRs unless other	S=Covered or Coate	d Sand Gr		ation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol (A		ible to all Li	Sandy Redo				-
Histic Epip			Stripped Ma	, ,			uck (A9) (LRR C) uck (A10) (LRR B)
Black Histi				ky Mineral (F1)			d Vertic (F18)
	Sulfide (A4)			ed Matrix (F2)			rent Material (TF2)
	ayers (A5) (LRR C)	Depleted Ma	atrix (F3)			Explain in Remarks)
	(A9) (LRR D)			Surface (F6)			
	Below Dark Surface	(A11)		rk Surface (F7)		2	
	Surface (A12) cky Mineral (S1)		Redox Depre	. ,			f hydrophytic vegetation and
	yed Matrix (S4)		Vernal Pools	(F9)			ydrology must be present, turbed or problematic.
	yer (if present):					uniess dis	turbed or problematic.
Type: NO							
Depth (inche			_			Hydric Soil P	resent? Yes No X
Remarks:						Tryanc con r	resent: resNo_X
	ular blocky. Sa	amples w	ere moistened	prior to soil co	lor dete	ermination.	
Ü	,	•		•			
	-						
HYDROLOGY							
-	logy Indicators:						
Primary Indicate	ors (minimum of one	e required; c	heck all that apply)			Seconda	ary Indicators (2 or more required)
Surface Wa	ater (A1)		Salt Crust (E	311)		Wat	ter Marks (B1) (Riverine)
High Water	Table (A2)		Biotic Crust	(B12)		Sed	liment Deposits (B2) (Riverine)
Saturation ((A3)		Aquatic Inve	ertebrates (B13)		Drift	Deposits (B3) (Riverine)
	s (B1) (Nonriverin	,	Hydrogen S	ulfide Odor (C1)		X Drai	inage Patterns (B10)
	eposits (B2) (Nonr			izospheres along Li	ving Roots	(C3) Dry-	Season Water Table (C2)
	its (B3) (Nonriverin	ie)		Reduced Iron (C4)		Cray	yfish Burrows (C8)
	I Cracks (B6)			Reduction in Tilled	Soils (C6)	X Satu	uration Visible on Aerial Imagery (C9)
	Visible on Aerial Ima	agery (B7)	Thin Muck S				llow Aquitard (D3)
	ed Leaves (B9)		Other (Expla	in in Remarks)		FAC	-Neutral Test (D5)
Field Observati			V				
Surface Water P				es):			
Water Table Pre	sent? Yes	No_	Depth (inch	es):			
Saturation Prese	ent? Yes	No _	A Depth (inch	es):	Wetlan	d Hydrology P	resent? Yes No X
(includes capillar Describe Record		auge, monito	ring well, aerial ph	otos, previous inspe	ctions) if	available:	
20.100014	- and tomouning	g - ,oiiito	gon, acriai pin	c.oo, previous mape	ouona), Il i	avanable.	
Remarks:							
	en south of se	asonal w	etland in unlar	nd hahitat Sar	nnle tal	en annrovir	mately 350 feet south of
•			cuanu in upiai	ia iiabitat. Sal	iibie rak	τι αρμισχιι	natery 330 reet south of
rittsburg-A	ntioch Highwa	у.					

Project/Site: Solar RV/Boat and Mini-Storage		City/Cou	_{unty:} Pittsbu	rg/Contra Costa	Sampling Date: Oct 8, 2021
Applicant/Owner: Chris Koenig/Pacific Property Advisor	ors, Inc.			State: California	Sampling Point: 6
Investigator(s): M. Bole, C. Bole		Section,	, Township, Ra	ange: T 13 N, R 1 E, Lo	os Medanos Land Grant
Landform (hillslope, terrace, etc.):Terrace		Local re	elief (concave,	convex, none):none	Slope (%): 1-2%
Subregion (LRR): LRR – C	Lat: _38	.01042	N	Long:121.84509W	Datum: NAD 83
Soil Map Unit Name: Rincon clay loam				NWI classifica	ation: _ non-hydric
Are climatic / hydrologic conditions on the site typical for this t	ime of ye	ar? Yes			
Are Vegetation, Soil, or Hydrology sig					resent? Yes X No
Are Vegetation, Soil, or Hydrology nat	urally pro	blematic	? (If ne	eeded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map sl				ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes No	Х				
Hydric Soil Present? Yes No		- 1	the Sampled		No_X
Wetland Hydrology Present? Yes No	X	W	itnin a wetiai	nd? Yes	NO
Remarks:					
VEGETATION – Use scientific names of plants					
	Absolute		ant Indicator	Dominance Test works	heet:
Tree Stratum (Plot size:) 9 1. None			s? Status	Number of Dominant Spe That Are OBL, FACW, or	
2				That Are OBL, FACVV, OF	(A)
3				Total Number of Dominal Species Across All Strata	
4					
				Percent of Dominant Spe That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size:)					
1. None 2.				Prevalence Index works	Sneet: Multiply by:
3					x 1 =
4				FACW species	
5				FAC species	
_				FACU species	x 4 =
Herb Stratum (Plot size: 10' x 10') 1. Avena barbata	40	Υ	NI	UPL species	
2. Bromus hordeaceus	20	'	_	Column Totals:	(A) (B)
3. Bromus madritensis	15	N	UPL	Prevalence Index =	= B/A =
4. Centaurea solstitalis	5	N	NI	Hydrophytic Vegetation	Indicators:
5				Dominance Test is >	50%
6				Prevalence Index is s	
7					ations ¹ (Provide supporting or on a separate sheet)
8	80			Problematic Hydrophy	
Woody Vine Stratum (Plot size:)	-00 =	= Total C	Cover		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1. None					nd wetland hydrology must
2				be present, unless disturb	ed or problematic.
_	=======================================	Total C	over	Hydrophytic	
% Bare Ground in Herb Stratum 20	Biotic Cru	st		Vegetation Present? Yes _	No _X
Remarks:					

0		•		
9	E.	- 3	я	

Sampling	Daint	Ь
Samolino	Point:	-

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) _ Surface Water (A1) _ Salt Crust (B11) _ Water Marks (B1) (Riverine) _ High Water Table (A2) _ Biotic Crust (B12) _ Sediment Deposits (B2) (Riverine) _ Saturation (A3) _ Aquatic Invertebrates (B13) _ Drift Deposits (B3) (Riverine) _ Water Marks (B1) (Nonriverine) _ Hydrogen Sulfide Odor (C1) _ Drift Deposits (B3) (Riverine) _ Sediment Deposits (B2) (Nonriverine) _ Oxidized Rhizospheres along Living Roots (C3) _ Dry-Season Water Table (C2) _ Drift Deposits (B3) (Nonriverine) _ Presence of Reduced Iron (C4) _ Crayfish Burrows (C8) _ Surface Soil Cracks (B6) _ Recent Iron Reduction in Tilled Soils (C6) _ Saturation Visible on Aerial Imagery (C9) _ Inundation Visible on Aerial Imagery (B7) _ Thin Muck Surface (C7) _ Shallow Aquitard (D3) _ Water-Stained Leaves (B9) _ Other (Explain in Remarks) _ FAC-Neutral Test (D5) _ Surface Water Present? _ Yes No No	Profile Description:	Describe to	the depth ne	eded to docu	ment the ind	dicator or	confirm	the absence	of indicators.)	
O - 6 10YR 4/2 100 NONE firm, blocky dark grayish brown blocky very dark grayish brown land the properties of the prope	Depth	Matrix							,	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.					%	Type ¹	Loc ²			
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. "Location: PL=Pore Lining, M=Matrix, Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histocal (A1)	0-6 10YF	R 4/2	100	NONE				firm, block	ky dark grayish	brown
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*:	6-12 10YF	R 3/2	100	NONE				blocky	very dark gray	yish brown
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*:										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*:										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*:					-					
Hydric Soll Indicators (Applicable to all LRRs, unless otherwise noted.)										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*:										
Hydric Soll Indicators (Applicable to all LRRs, unless otherwise noted.)										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*:										
Hydric Soll Indicators (Applicable to all LRRs, unless otherwise noted.)	¹Tupo: C=Concentratio	- D-Danisti	- DM Dad					. 2.		
Histosof (A1)	Hydric Soil Indicators	n, D=Depletio	on, RM=Redu	unless other	S=Covered or	Coated S	Sand Gra			
Histic Epipedon (A2)		. (Applicable	to all LNNs			,				ric Soils':
Black Histic (A3)		2)	-							
Hydrogen Suffide (A4)		-)	-			1)			, , ,	
Stratified Layers (A5 (LRR C)		A4)	_							
Tem Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A12) Depleted Bark Surface (F6) Redox Depressions (F8) Popular (F7) Popular (F8)						-/				
			_	_ Redox Dark	Surface (F6))			,	
Sandy Mucky Mineral (S1)			11) _			-7)				
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Restrictive Layer (if present): Type: NONE Depth (inches): Soil is angular blocky. Samples were moistened prior to soil color determination. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Final Deposits (B2) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Other (Explain in Remarks) Feld Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Surface Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Sample taken south of seasonal wetland in upland habitat. Sample taken approximately 750 feet south of			-	_ Vernal Pools	s (F9)					
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Pittsburg-Antioch Highway.	Sample taken sou	ith of seas	onal wetl	and in uplar	nd habitat	. Samp	ole tak	en approxir	mately 750 feet	south of
	Pittsburg-Antioch	Highway.								1
l l										

ENCLOSURE E: Resumes



MARCUS H. BOLE, M.S., Senior Wildlife Biologist

EXPERTISE:

Natural Resource Management Biological Monitoring for Construction Projects Protocol-level Special Status Plant & Wildlife Surveys Wetland Delineation, Mitigation, and Permitting Phase I & II Environmental Site Assessments CEQA/NEPA Document Preparation and Coordination

EDUCATION:

Masters Degree in Environmental Science
North Dakota State University, Fargo, 1976
Baccalaureate in Biology & Geography
California State University, Sacramento, 1970
Registered Environmental Property Assessor (REPA #647913)
Certified (OSMB) Disabled Veteran Business Enterprise (DVBE)
California Department of General Services (#0000847)
Service Disabled Veteran Owned Small Business (VA)

PROFESSIONAL HISTORY:

Marcus H. Bole & Associates, Senior Environmental Scientist, 1993 - Present U. S. Federal Government Manager of Environmental Science and Project Management, Natural Resource Management, Evaluation and Compliance, 1990 – 1993 United States Air Force, Environmental Scientist, U.S. & Overseas, 1970-1990 California State Division of Forestry, Biological Field Technician, 1966 - 1970

TRAINING AND REGISTRATIONS:

Air Force Institute of Technology -1991

Professional Education, Wright-Patterson Air Force Base, Ohio

Natural Resource Management, Biological Assessment

Air Force Center of Environmental Excellence-1992

Professional Education - Brooks City-Base, Texas

Natural Resource Management- National Environmental Policy

National Registry of Environmental Professionals 1993 - Present

Registered Environmental Property Assessor (REPA)

Yearly Continuing Education Credits - Biological/Environmental Science

Association of Environmental Professionals - 2000-2021

Professional Education Program - Biological Sciences

Bat Survey Techniques, Impact Assessment, and Mitigation - Leila Harris, UCD

Richard Chinn Environmental Training Institute - 2000-2021 Yearly re-certifications - Wetland Identification, Mapping and Reporting

Sierra Nevada Field Campus - 2000-2021

Continuing Education - Workshops in Natural Resource Evaluation

San Diego Natural History Museum - Department of Herpetology, 1998-2021

Training under Bradford D. Hollingsworth, Ph.D., Curator

Reptile and Amphibian Identification and Evaluation

Dr. Murray E. Fowler Veterinary Hospital - Sacramento Zoo, 1998-2021

Familiarization and identification training - Giant Garter Snake

Museum of Wildlife and Fish Biology - University of California, Davis Continuing education in conservation biology, 1998-2021

REPRESENTATIVE EXPERIENCE - Natural Resource Evaluation and Reporting:

Mr. Bole has over forty years of experience in environmental project management. He has supervised work forces of professional engineers, scientists and technicians responsible for pollution monitoring, permitting, abatement, environmental impact analysis, natural resource evaluation and restoration programs and preserve habitat management. As a biologist, Mr. Bole has conducted numerous Biological Assessments in accordance with United States Fish & Wildlife Service (USFWS), California Department of Fish & Wildlife (CDFW), United States Army Corps of Engineers (USACE) and the California Department of Transportation (Caltrans) guidance, protocols and regulations. He has conducted wetland delineations in accordance with the United States Army Corps of Engineers regulations throughout California. As Senior Environmental Scientist, Lt. Colonel Bole, Chief, Environmental Affairs, was directly responsible training and employing a staff of 200 biologists, botanists and environment scientists conducting hundreds of Biological Assessments at five major military installations in California (1990 - 1993). As lead environmental scientist for the Department of Veterans Affairs, National Cemetery Administration, he has been directly responsible for conducting environmental assessments, preserve monitoring and habitat restoration for the expansion over 160 National Cemeteries in the United States. The California Superior Court system (Yuba & Plumas Counties) has qualified Marcus Bole as an expert witness in wildlife and fisheries biology. Mr. Bole is an approved biologist for the Yolo Habitat Conservancy, East Contra Costa Habitat Conservancy and the South Sacramento Habitat Conservation Plan. Following is a list of representative experience for selected species:

- Vernal pool species habitat and preserve management
- California Red-legged Frog & Foothill Yellow-legged Frog
- Swainson's hawk & White-Tailed Kite
- Tri-Colored Blackbird & Bank Swallow
- Western Burrowing Owl, bat species
- Western Yellow-billed Cuckoo, Least Bell's Vireo
- Western Pond Turtle, Giant Garter Snake
- Valley Elderberry Longhorn Beetle
- San Joaquin kit fox
- Fresno kangaroo rat
- Blunt-nosed Leopard Lizard, California Tiger Salamander
- Federal and State Listed Plant Species



CHARLENE J. BOLE, Senior Botanist

EXPERTISE:

Environmental Project Management
Natural Resource Management
Environmental Site Assessments (Phase I & II)
Threatened and Endangered Species Surveys and Reporting
Senior Botanist
Wetland Delineation, Mapping, Mitigation and Permitting

EDUCATION:

Master Degree in Environmental Science
North Dakota State University, Fargo, 1979
Baccalaureate in Geography and Botany
California State University, Sacramento, 1974
Graduate Course work in Environmental Sciences, Botany & Wildlife Biology
Registered Environmental Property Assessor (REPA# 229436)
State of California Standard Teaching Credential, Environmental Science
California Community College Credential, Environmental Science

PROFESSIONAL HISTORY:

Marcus H. Bole & Associates (MHB&A), Senior Environmental Scientist, 1991 - Present Consultant, Veterans Administration, National Cemetery Administration, 2005-Present Consultant, Regulatory Permitting, US Army, Department of Defense, Belgium, 1988 - 1991 Consultant, Senior Project Manager, Environmental Development Center, Belgium, 1988 - 1991 Consultant, Senior Environmental Scientist, National Cemetery Administration, 2005 – Present

TRAINING AND REGISTRATIONS:

National Registry of Environmental Professionals 1993 - Present

Registered Environmental Property Assessor (REPA)

Yearly Continuing Education Credits - Biological/Environmental Science

Association of Environmental Professionals - 2000-2021

Professional Education Program - Biological Sciences

Bat Survey Techniques, Impact Assessment, and Mitigation - Leila Harris, UCD

Richard Chinn Environmental Training Institute - 2000-2021

Yearly re-certifications - Wetland Identification, Mapping and Reporting

Sierra Nevada Field Campus - 2000-2021

Continuing Education - Workshops in Natural Resource Evaluation Special status botanical species of California.

From: Farinha, Melissa@Wildlife < Melissa. Farinha@wildlife.ca.gov>

Sent: Friday, September 3, 2021 10:11 AM

To: Jentsch, Stephanie <Stephanie_Jentsch@fws.gov>; Joanne Chiu <Joanne.Chiu@dcd.cccounty.us>

Subject: RE: [EXTERNAL] RE: Biologist Approval Request - Marcus Bole and Charlene Bole, Pittsburg Self Storage

Project on APN 074-100-018

Good Morning Joanne,

CDFW approves Charlene and Marcus Bole to conduct planning and preconstruction surveys for the Pittsburg Self Storage Project on APN 074-100-018.

Thank You,

Melissa Farinha Environmental Program Manager Bay Delta Region, Delta Habitat Conservation Program 2825 Cordelia Road, Suite 100 Fairfield, CA 94534 (530) 351-4801

From: Jentsch, Stephanie < Stephanie_Jentsch@fws.gov>

Sent: Thursday, August 26, 2021 5:24 PM

To: Joanne Chiu < <u>Joanne. Chiu@dcd.cccounty.us</u>>; Farinha, Melissa@Wildlife < <u>Melissa. Farinha@wildlife.ca.gov</u>> **Subject:** Re: [EXTERNAL] RE: Biologist Approval Request - Marcus Bole and Charlene Bole, Pittsburg Self Storage Project on APN 074-100-018

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Hi Joanne,

Mracus and Charlene Bole are approved to conduct planning and preconstruction surveys for the Pittsburg Self Storage Project on APN 074-100-018.

Thank you, Stephanie